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AMERICAN
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL.
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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CONTRIBUTED ARTICLES

The Digestive Machinery of Honey-Bees.

BY PROF. A. J. COOK.

We know from our study of Geology that early life-forms in any branch of animals are simplest, and later gain more and more in complexity. Among insects, bees and their near congeners were the latest to develop. Indeed, there were no flowering plants until the Cretaceous Age—the age just before recent time—and so of course there could have been no flower-loving or nectar-sipping animals. As bees were so late in their evolution, we should expect them to exhibit marvelous development, not only as a whole, but also in their various organs. And such is the case to a most markt degree. I know of no animals—nor need I except man in the statement—where the development of so many organs is carried so far. Man in his brain, and the hand that it directs, shows transcendent modification. The bee in its mouth-organs—almost all of them—in its glandular structures; in its leg development; in the very hairs that adorn it; in its wondrously modified ovipositor; and, lastly, in its marvelously modified digestive organism, shows structural modifications that are hardly surpast in all the realm of life. If we add to these the functional differentiation into queen, male and worker, we surely have reason to place the bee away in the lead among the marvels of God's creation.

Mr. J. M. Young and Apiary, of Cass County, Nebraska.—See page 8.

The bee's food is peculiarly refined and complex. Its provident storing of food, social habits, long life, entire care of the young, are exceptional among all the lower animals. It fashions vessels for food depositaries, of incomparable mechanism and beauty. It has lunch-baskets and dinner-pails that challenges anything of man's device; while its brushes, its pincers, as also its industry, may well give it a first place among all God's creatures—man alone excepted.

The food of bees is for the most part the very concentrated pollen of flowers, which, like meal and flour, is rich in albumen, starch and oil; and honey, or the transformed nectar of flowers, which supplies the other element of a perfect food regimen. To prepare such food, we should expect the bee to possess a very highly wrought digestive organism. When we add to this the fact that the young or larval bees are wholly fed by the mature bees, and with a food so perfect in its composition, combination and preparation that almost all of it—essentially all—is assimilated, then surely we are in way to appreciate the alimentary apparatus of the honey-bee.

Once more, the queen-bee, also fed by the workers on prepared food, possibly the same that nourishes the immature bees, lays often 2,000 to 3,000 eggs daily. These actually weigh nearly double the queen's entire weight. Does this not speak volumes for the excellence of the food given her, and of the organism that prepares it? I have already shown to the readers of the American Bee Journal how honey is the result of action upon the nectar of flowers, by the secretion from the large glands in the head and thorax, which is emptied just at the base of the tongue, and so mingles generously with the nectar as it streams into the mouth en route for the honey-stomach. This part of the bee's alimentary system and alimentation is not superior or greatly different from that of many other animals, and I will not discuss it farther now.

The point of greatest interest is the source of the "jelly," the specially prepared food for the larvæ and the queen, and doubtless the drones. Some have thought this to be a secretion from the large lower head-glands. But as I have shown that charcoal finally pulverized and fed to bees is found in this "jelly," and in the "royal jelly"—the special food of the larval queen—it seems certain that the jelly cannot be a secretion. The most probable view seems to be that the pollen is mixt with the secretion from the lower head-glands and then past to the true stomach, possibly mixt with some honey, and digested or changed to the marvelous food—the jelly. This is probably regurgitated and served to the larvæ, queen and drones. If the secretion from the lower head-gland is not used to digest the pollen, it is difficult to know what is, as it does not seem possible that the stomach could secrete enough "gastric juice" to do it.

An objection to the above view is urged in the fact that a membranous tube hangs from the lower end of the honey-stomach into the true stomach, which acts as a valve like our ilio-colic valve, and would not permit any of the contents to pass from the true stomach back to the mouth. This would be so except that the bee doubtless has the power to draw the honey-stomach up, so that this tube ceases to hang into the true stomach, and thus loses its force as a valve. Just so our ilio-cæcal valve can be made to lose its valvular action, as in case of severe wretching when the contents of the large bowel may be vomited up. Thus it seems more than probable that the incomparable food prepared by the nurse-bees is compounded of digested pollen and honey; that it is prepared in the true stomach, and regurgitated for the queen, drone, larvæ, and possibly for the older workers.

There is one more organ in the honey-stomach of the worker-bees which merits notice. It is a spherical organ with jaw-like segments that leave a central opening, thickly set with hairs that reach upwards. When the bee is taking honey into the honey-stomach these jaws are constantly opening and closing, which draws in the nectar and forces it back. Any pollen in the nectar is caught and held by the hairs, and thus these stomach-jaws, or this honey-stomach mouth is constantly ridding the nectar or honey of the pollen; and thus we see why honey is so free of pollen, even though the nectar may be rich in the same. This ever-active stomach-mouth is always screening it out, as the bee is gathering the precious nectar.

Los Angeles Co., Calif.

A Lady's Experience with Bees in 1897.

BY MRS. L. C. AXTELL.

We began the season with 150 colonies, one absconded, flew away, and we did not miss it until gone, but we knew all came through the winter alive. A very few were weak, but on the whole they wintered splendidly.

We did not open the hives until in May, when he hunted out the queens and clipt their wings. We found two or three queenless colonies, and gave them eggs and larvæ, and both reared themselves a queen. One had to have brood and a cell given the second time. When swarming began we took combs from the parent colonies and built up those colonies into strong ones, and put on sections. We increast from 150 to 162 colonies, and secured about 5,000 pounds of honey, 36 or more pounds per colony, spring count.

DID NEARLY ALL THE WORK ALONE.

As Mr. Axtell has now a peach orchard of about 1,600 trees, and 200 or 300 pear, plum and apple trees, besides raspberries, blackberries and strawberries to care for, I took the sole care of the bees the past season, after being taken from the cellar, up to October, except Mr. A. carried the honey to the honey-house for me after it was taken from the hives; also while resting in his hammock during the middle of the day he watcht swarming and caught in the queen-cages about half a dozen queens. The rest of the work I did myself, and *enjoyed* it. I felt burdened but little with my bee-work, because I took all needed rest, neglected nothing that needed to be done on time, and made every step count. I do not think we had a great honey crop, but surely our bees paid for my work. I sold all the best grade, delivered at our town, for 10 cents per pound at one sale, and the rest of darker grades are working off in small sales, and at stores, for about the same price.

FARMER BEE-KEEPERS INJURING THE HONEY MARKET.

If farmers would not be in such a rush to sell their honey, and ask a fair price for it, and hold it at that price, it would not bring honey down every fall as it does. They act as if they were afraid they could not sell if they did not offer it lower than those who had larger crops. This seems to hurt our market more than honey adulterated, as people are learning that the honey in tumblers is sugar syrup with but a trifle of honey in it, and those who come for pure honey will not buy it in that way to a large extent, and yet adulterated honey is a drawback to good prices.

A HONEY SOCIABLE—CLEANING SECTIONS.

We had the "Aid Society" of the Christian church meet at our house one day about a month ago, with their pastor—some 20 ladies to help me prepare and clean the honey sections before selling. We requested them all to wear gowns that washing would not hurt, and bring sharp pocket-knives. Some came at 9 and 10 o'clock, and staid all day. I got dinner for them, and paid the society 10 cents besides, for every one who workt. They exprest themselves as having a very enjoyable time, and said they wanted to come again next year, and considering their being new hands they did their work well. They fitted up some 1,500 pounds that day.

To get the honey ready for market is the hardest and most difficult bee-work for me. To hire it done by young people, it is so often injured; honey cut, and sections sliced off or haggled, but to bring the best price, each section should be nicely cleaned. Those ladies being middle-aged, did their work better than I feared it might be done.

The honey should be in a pile in the middle of the room, or two or three rooms, so people could get around it easily to work.

HELPING WEAK COLONIES.

In the fall, when taking off honey, or even in midsummer when a few bees remain in the supers, and gather in a bunch on the window, which they will do (unless a large escape is given) as soon as they cluster, I take a milk-pan with warm water in it—just warm enough not to chill the bees—and brush the cluster of bees into it and carry quickly and pour them down close to the entrance of a weak colony, if we have any. I put all I can get in that way in front of one hive, until I am sure it is strong enough. If the weather is cool I would lay a soft cloth over the cluster.

LAYING WORKERS.

In September I found one colony that had laying workers. I took two combs and gave to colonies that did not have combs enough to make a full colony. Two other combs I gave to a similar colony, and took all the bees and gave them to a weak colony that had a queen, and the returning bees were allowed to go into another weak colony. I could not detect that scarcely any bees were killed, and those I carried away mostly remained, they having found a queen made them contented to remain, and put a shade-board over the front of the hive.

I felt that such a disposition of combs and bees at that time of the year was better than to help them rear a queen.

UNITING WEAK COLONIES UNPROFITABLE.

The uniting of weak colonies in the spring does not pay very well. After uniting, in a few days the colony seems just about as weak as before being united, but if strong to cover two combs well in April or May, exchange the two and giving one or two of brood with eggs and larvæ will carry them through until they can rear themselves a queen, and then build them up in swarming-time. I find it does not pay to fuss much with small colonies; fix them up so they can keep warm, and leave them alone, and give the extra care and time to the strong ones. It does not pay to take much brood from the strong to build up the weak until in swarming-time.

Warren Co., Ill.

Something About Swarming—How It is Done.

BY G. M. DOOLITTLE.

Question.—"A bee-keeping friend and myself have had a dispute relative to how swarming is conducted, and we have agreed to leave the matter to an arbitrator. He has chosen you as that arbitrator, and I could not object. We also have agreed to ask you to answer, or give your views in the matter, in the American Bee Journal, as we both take that paper, and both think that your views may not be uninteresting to other readers also. My friend claims that when a swarm issues from any colony, that the old bees, or field-workers, go with the old or reigning queen, leaving the younger bees with the queen-cells left behind to go out with any after-swarm which may chance to issue. He also claims that a young queen hatches within a day or so after the first swarm has left, which drills the young bees till they are inclined to go out with her in an after-swarm. I claim that bees of all ages go with the old queen in the prime swarm, and that the young queen, or queens, which go with the after-swarms do not hatch out in several days after the first swarm went out. Which is right? Or is swarming conducted differently from what either of us think?"

ANSWER.—Natural swarming has always had a charm or fascination to me, and among my earliest recollections is the vivid picture of thousands of bees pouring out of their hives and whirling in midair, describing circles and passing each other in such rapid movements that I stood and wondered how they could possibly do it without hitting each other, while the settling on a limb and their march into the hive, when father put them down in front, astonisht me as much as any of the rest of the performance.

From these first impressions, I presume, more than from anything else, has come my preference for natural swarming as a means of increase. Being thus interested I have experimented largely to know under what conditions swarms issued as a rule, and have found, as regards the age of bees, that bees of all ages in about equal proportions leave the parent hive with *all* swarms, from the old forager to the bee that has not been out of the cell more than from 6 to 12 hours. Many times have I seen the ground in front of the hive nearly covered with bees so young as to be unable to fly; and as often have I seen the old field-workers with their worn and jagged wings hanging with the swarm, and those having their pollen-baskets filled with pollen, side by side with the young, downy bees which had been barely able to fly to the cluster. Thus we have the field-bees, the wax-workers, and the nurse-bees in about equal proportions, so as to make a prosperous colony at once upon their entering their new home, this showing that the All-Wise Creator knew how things should be when he pronounced all that he had made *good*.

If it were not for young bees going with the swarm, the hive would be nearly depopulated by the bees dying of old age before the brood could hatch out to take their places, as it must be nearly two days before sufficient comb would be built so the queen could deposit eggs in the cells, and then it would take 21 days from that time before any bees would hatch.

Again, if all were old or field bees the hive could not be filled as profitably with comb; for when in a normal condition the bees between the age of 8 and 24 days old are the ones which do this work. That this division of bees in a swarm is just as it should be is another reason why I prefer natural swarming as a means of increase, altho I have made swarms artificially which have given as good results as have any natural swarms.

But let us look inside of the hive when preparations for swarming are being made, and see if we cannot arrive at the truth in the matter as regards the condition under which a swarm issues when the first queen hatches, etc.

The first indication of swarming is the laying of eggs in the drone-comb. While eggs in the drone-cells is not a sure sign that a swarm will issue, yet as far as I have observed swarms never do issue without eggs being laid therein. If the weather is propitious the next step is the building of queen-cells, soon after which the queen deposits eggs in them. In three days these eggs hatch into larvæ, and these larvæ are fed an abundance of food by the nurse-bees for six days, when the cells containing the embryo queens are sealed over. If no bad weather has intervened the swarm issues the next day, the old queen going with the swarm. Bear in mind that this is the rule with the black or German bees, and generally with other races; still, the Italians often swarm when the eggs are first laid in the queen-cells, and some without the least preparation at all except drones in a time when swarming runs high in an apiary.

All good authorities admit that the queen-larva remains seven days in the cell after it is sealed over, as my experience also proves, and any claim that a young queen would hatch within a day or two after the swarm issues would be fallacious, unless bad weather should occur at about the time the first queen-cell was sealed. When such bad weather does occur the thing is barely possible for the swarm to be kept back for four or five days after they would naturally issue, in which case the first queen might hatch in one or two days after the swarm went out. But this is something which I have had occur but very few times since I have kept bees, covering a period of nearly 30 years, and in nearly all such cases the bees destroy the queen-cells and postpone swarming for an indefinite period.

So I find, as a rule, that the first queen emerges from her cell from six to seven days after the swarm issues. If more swarms are allowed, they come forth two days after, or from the eighth to the ninth day after the first, and never later than the sixteenth day. As soon as it is decided that no more swarms shall issue, all queens in the cells are destroyed, when in from five to nine days the young queen goes out to be fertilized, two days after which she commences to lay. If the apiarists stops all after-swarming by the cutting of the queen-cells, or by other means that keeps all of the bees in the old hive together after the first issue, I find that the young queen is much slower in going out on her wedding trip, and often does not commence to lay till from the twelfth to the sixteenth day.

Where one wishes to make artificial increase it is well to understand just how natural swarming is conducted, for with such knowledge one is more apt to succeed in having the right proportion of both old and young bees in the two parts after dividing.

Onondaga Co., N. Y.

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The Bee-Moth—Its Ravages and Destruction.

BY C. P. DADANT.

A few days ago while removing the dry supers from which the honey was extracted in September, and which had been returned to the bees so that they might clean them up, our boys discovered a colony in which both the super and the brood-frames were invaded by the bee-moth in such a way as to give no hopes of redeeming any of the combs. The bees had dwindled to nothing. I suggested that this was a piece of carelessness on their part, that it was a mistake to return a super to a hive that must have been suffering of the moth at the time when the honey was removed. It was with difficulty, however, that I convinced them that they were at fault, and that it was at all possible to detect the presence of the moth two months ago in a hive which is well-nigh destroyed at this date by them.

There is too much neglect of this kind among many apiaries. We do not sufficiently recollect that the moth becomes more numerous as the season advances. In the spring combs may be left for two or three months without protection and without showing much of the ravages of the moth, because they are then very scarce, having been reduced in numbers by the winter; for it is now very certain that ordinary winters in this latitude kill all but those of the moth which happen to be sheltered in colonies of live bees. The only hives in which they thrive in any perceptible way are those whose bees have died at the close of winter. They have kept a few moths alive, and when they dwindle away no living insect is left in the box but the straggling and rustic moth-worm. The few moths that hatch in spring make a second breed that appears in full force about the beginning of August. If these find suitable lodgings, the third breed will become formidable, for the moths are sufficiently plentiful at that late date to take by storm any hive that may prove destitute of queen or hatching bees. The eggs laid in the early part of September may not all hatch, if the season is cool; but if a warm fall gives them the opportunity they thrive in an astonishing manner.

It is not to be wondered that our forefathers were afraid of the moths for their bees. Until the invention of the movable-frame hive it was next to impossible to ascertain the extent of the danger to the bee-industry on the moth's account, and altho Mr. Langstroth himself was of the opinion, when he first wrote his book, that the moth was but little injurious to a healthy colony of bees, he was compelled, owing to the general opinion then prevailing, to treat of them as "a powerful enemy" of the bee. But he had already divined the true cause of the decadence of colonies in the fall and of the triumph of the moth. He wrote:

"Every year large numbers of hives are bereft of their queens, most of which are either robbed by other bees or sackt by the bee-moth, or first robbed and afterward sackt, while their owner imputes all the mischief to something else than the real cause. He might just as well imagine that the carrion birds, or worms, which are devouring a dead horse were the primary cause of its untimely end."

This argument struck the right chord, and a few years afterward our friend, Elisha Gallup, if I am not mistaken, came out boldly in the American Bee Journal with the assertion that there was no more danger from the moth, for a colony of healthy bees, than there is danger for a healthy cow being destroyed by the grubs, or larvæ, or the carrion fly, which is sure to infest every decaying carcass of dead animals during warm weather. This assertion, which may seem too far stretcht to the novice in bee-culture, is within the limits of facts. It must have seemed a bold statement in the days of patent moth-traps, but it proves more correct every day.

So we need not fear the moth if we keep our colonies healthy and strong. The colony mentioned at the beginning of this article was evidently queenless. It is quite probable that in September, when the honey was removed, the bees were sufficiently numerous to make a fair show, but it is also certain that a closer examination of the colony than was given to it while the honey was being extracted, would have brought out the fact that it was fast dwindling, and that the bees were already discouraged. A large number of eggs laid at its door, or on the outside of its combs, during the last days of September by the moths produced the result mentioned.

To this state of things there is no remedy; the proper thing would have been to examine the hives more closely during the summer, to make sure of replacing the failing queens.

The most disagreeable feature of the existence of the moth appears when the first crop of honey has been removed from the hives. If moths are plentiful, and especially if a few of them have managed to invade the bee-house, those nice white sections begin to leak and show traces of their disgusting paths. There is only one way to avoid this. Burn brimstone in the bee-house or under those crates of comb honey once a week, or about, until you may feel sure that the moths have been destroyed. The fumes of the sulphur will not destroy the eggs, and for that reason several repetitions of the fumigation are necessary. The extent of the fumigation needed may be ascertained by the house-flies in the room. A fumigation that will kill them will also destroy the living moths.

To make the burning of brimstone more thorough and more easy, we melt it over a stove, and dip strips of rags or gunny in the molten sulphur. These act as a wick, and the brimstone burns more promptly and more evenly than otherwise. Hancock Co., Ill., Nov. 27, 1897.

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No. 1—Recollections of an Old Bee-Keeper.

BY DR. E. GALLUP.

I will endeavor to show the readers of the American Bee Journal the difference in starting in bee-keeping when I commenced and in starting now. I was born in the year 1820, in what is now called "Canada East," or Province of Quebec, 65 miles north of Vermont, and about 75 miles east of Montreal, on the St. Francis river. I mention this to show you that I was located in a far different climate from California.

From my earliest recollections I took a great and absorbing interest in bees. My father kept a few colonies at different times, but had no luck with them. In those days every success or failure was attributed to "luck." There were no books on bees to be had. In fact, I never heard of such a thing until I was about 23 years old. Father built a flouring-mill and sawmill when I was 15, and by an accident, or my luck, I was installed miller. The mill was located three miles from the home farm, so I coaxt and teased father to let me purchase a colony of bees. He finally reluctantly consented, as he said there was no luck in bees at all.

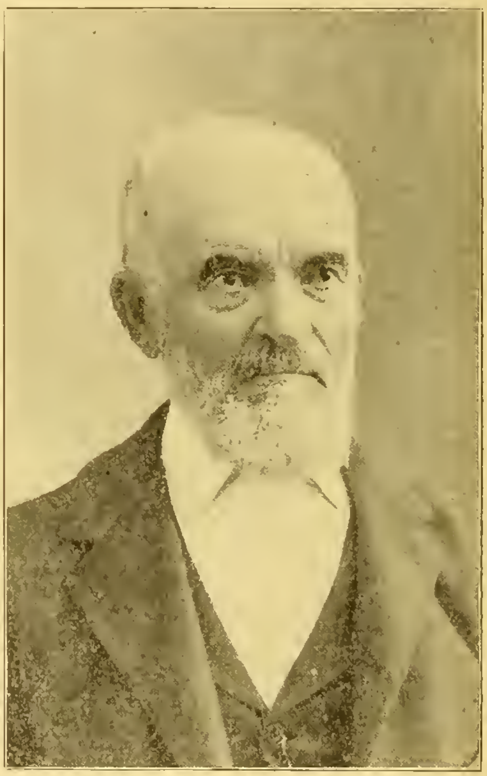
The ruling price of a colony of bees was $2.50. There was a widow that I was acquainted with that had a lucky colony. She was very anxious to get some lumber, and I was just as anxious to get her lucky bees, so after bantering with her for several weeks, she finally consented to let me have her lucky colony for $7.00 worth of lumber, at cash price, which was $2.50 per 1,000 feet. Well, I moved the bees quick without consulting father, for fear she would change her mind.

Father was terribly workt up to think that I had been so foolish as to pay such a price for a colony of worthless bees, as he called them, but I consoled myself with the thought that I had not only got her bees, but her luck also. Well, as it turned out, she lost all her bees—some seven colonies—the following winter, and I got two good swarms and a box of about 20 pounds of nice honey. Then didn't I proudly boast of my trade in getting the lady's luck!

My bees all came through the winter in good condition, but the lucky colony always did the best. The idea of luck was never thoroughly establisht in my noddle, so I began to study the whys and wherefores.

That lucky colony was in an old-fashioned straw-skep, as it was then called, and it being circular and smallish at the top, every comb except one small one at one side was worker-comb. Bees were all wintered on the summer stands, which was usually an open shed facing the south or southeast. They were confined to the hives from the first of November until April 15, or thereabouts, and sometimes until the first of May. No one had thought of wintering bees in a cellar. The straw being porous, there would be no accumulation of frost from the breath of the bees in cold weather in the hive, and we frequently had cold weather, oftentimes 40° below zero for six and eight days in succession. Then we would lose our bees in box-hives. I lost all but my lucky colony several times. I would shut my box-hives up, all except some small notches cut in the bottom at one side for entrance. My idea was to keep them warm.

I had an aunt get married, and settled across the river from the mill, and she was a great bee-keeper, that is, she could rattle tin pans and ring bells when they swarmed, and compel them to cluster, and then she could hive them without getting stung, etc. Well, she would make hives with a hand-saw, hammer and nails out of rough hemlock lumber, set them on top of a large stump, without any bottom-board, and place a large stone on top to keep the wind from blowing the hive off. The stump being cut uneven, it left plenty of bottom ventilation. Finally, she had one hive that crackt open from top to bottom, and the crack opened fully three-fourths of an inch at the edge of the combs, so we could look right in on the bees. I felt almost sure that colony would freeze to death, so when the mercury would get down to 35° and 40°, I would go over and see how they were getting on. I could hear them roar and hum several rods off. I have stood and watcht them many times until I would get so cold that I could stand it no longer.



Dr. E. Gallup—From a recent photograph.

The bees on the inside of the cluster were all the time rushing to the outside for air, while those on the outside were rushing to the inside for warmth. There was a plain case of manufacturing warmth by activity, or, as we might say, electricity. They were a perfect dynamo. That colony wintered the best in the lot. My bees, that I kept warm, nearly all died that winter. Orange Co., Calif.

[To be continued.]

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

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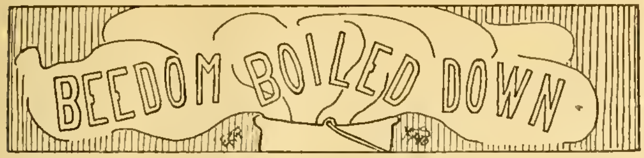
BEEDOM BOILED DOWN.

Sorghum for Bees in Winter.—Fred S. Thorington, in Progressive Bee-Keeper, tells of a case in which the honey was taken from a colony, and a single dose of sorghum fed to the bees finisht them. In another case the bees' stores were taken and sorghum given, and the bees absconded.

The New Fence with the plain or no-bee-way section, says Gleanings, can be used in old-style T supers or section-holders. All that is necessary is to have the fence or cleated separator made the right size to fit. The company will furnish the right fence to order, and can make them all ready put together at a cheaper rate than one could put them together himself, special machinery being used to glue the parts together.

Prevention of Swarms.—L. A. Aspinwall found this year that his hives were too small to prevent swarming by means of perforated dummies, and expects next year to use hives a third larger. In four cases, he secured the return of the swarm, queen and all, by vigorously smoking at the entrance as soon as the swarm began to issue. He thinks the swarm returned because they could not scent the queen.—Review.

Bee-Stings for Rheumatism.—Reports as to the effect of bee-stings on rheumatism continue to conflict, some reporting success, others failure. E. W. Moore says his mother, 62 years old, had for years lost the use of her left hand through rheumatism. Last summer, hiving a swarm alone, her hand was badly stung and swelled greatly, but when the swelling went down the joints were no longer stiff, and now she can use the hand as well as ever.—Progressive Bee-Keeper.

The Wells' System.—This system of having two colonies in one hive with a perforated division between, seems to be well liked by a few, but not to gain in popularity with the masses. Mr. Loveday, in the British Bee Journal, says he gets as much from one double hive as from three single ones; but that one Wells hive makes quite as much work as three single-queened ones. He says: "The more experience I have of this system the more I am convinced that it cannot be generally adopted."

Finding Queens.—The editor of Gleanings is askt the easiest way to find the queen in a hive just boiling over with bees. Says there is no easy way. If he doesn't find a queen in twice looking over the frames, he closes the hive and in two hours more takes another look. If he still fails to find her, which occasionally happens with black bees, he puts an empty hive in place of the one on the stand, puts perforated zinc at the entrance, shakes the bees on the ground in front, and if the queen isn't too small she's sure to be caught.

Uniformity of Supplies.—J. W. Rouse, in Progressive Bee-Keeper, gives expression to the often needed but seldom heeded advice to beginners, to try to use nothing but standard goods, and not to be in a hurry about inventing improvements. Believes in improvements, yet the inventions he has seen, even those possessing merit, are no better than the regular goods in use. Thinks most bee-keepers who are using odd sizes are doing so just because they got started that way, and would be glad to change into the regular style if it were not for the expense.

A New Way of Transferring, or at least of getting a box-hive colony to occupy a frame-hive, is given by C. Delmotte in Le Progres Apicole. June 5 he dug a hole in the ground the full depth of the box-hive that had stood there, put the hive upside down in the hole, covered it with a board, having a hole 12 inches in diameter, and placed on this the frame hive. A piece of comb to serve as a ladder for the bees was placed between the combs of the box-hive, extending up between the frames of the upper hive. Then earth was packt around both hives at the junction. An entrance was made in the frame hive an inch or two from the top at the front, obliging the bees to go in and out there. July 22, finding four frames of brood in the upper hive, he took out the box-hive, filled up the hole with earth, set the frame hive back in its place and put the box-hive on top, with what brood and bees were in it, no communication being between the two hives. 23 days later he shook down in front of the frame hive all the bees in the box-hive, a young queen having been reared among them, and found in the box-hive neither brood nor honey. Of course the box-hive was then taken away.

Going to the Fairs.—Editor Hutchinson's description, in the Review, of the way he travels from one fair to another, makes a page of very interesting reading. He has his traps and calamities all with him in a freight car, in which he sometimes spends two days and two nights, but when it comes to being jounced off the car floor at night and being obliged to *hold on* your victuals while they're cooking on an oil-stove to keep them from being jiggled or jerkt off, one might prefer to stay at home with cross hybrids so as to have a civilized meal and a stationary bed.

Fence Separators.—S. Brautigam, in Progressive Bee-Keeper, says the fence makes a good, strong separator, the objection, however, is the time it takes to put together, a minute to each separator. (That needn't matter, however, if they are sold ready made up, and *if* the price is low enough.) He proposes to avoid the necessity for using them by having sections made with the usual inset, and then have a thin saw-cut on the outside of the 1⅞ section, say ⅛ inch from the edge, and 1/16 or 3/32 inch deep. Then when the section is filled, a knife will split off the ⅛ inch, and you will have the no-bee-way section.

Rearing Queens on a Stick.—A. E. Dewar, of Australia, gives in Gleanings his plan of rearing queens. Cells are made after Doolittle's plan, a small quantity of royal jelly inserted, then a larva from choice stock. The frame with the cells is put in the upper story of a colony whose queen is kept below by a *double* honey-board, and when about ready to hatch the cells are given to nuclei. The same colony is kept at work starting the queens all through the season, fed at any time honey fails, and liberally supplied regularly with hatching brood, and 90 per cent. of the cells are accepted; 18 to 20 cells are generally put on one stick, but as many as 27 in one lot have been accepted.

Sweet Clover.—The October number of the Busy Bee was a sweet clover number, and it seems Editor Abbott could not stop all of a sudden, so quite a bit about sweet clover is found in the November number. Wm. Belshaw says: "As a bee-plant it is one of the best, equalling white clover in quality of flavor, doubling it in quantity on the same amount of ground covered, and it appears to possess the rare quality of being stored away as surplus honey rather than stimulating swarming." The editor thinks the last item valuable from the standpoint of the bee-keeper. But isn't the same thing true of buckwheat, or of any plant that comes as late as sweet clover?

Use and Abuse of Foundation.—Editor Hutchinson refers in the Review to the discussion in these pages concerning foundation by Deacon, Dadant and "Sage-Brush," copying the articles of the two latter, and then gives his own views by quoting a chapter from his book, "Advanced Bee-Culture," in which he finally sums up:

"If the bee-keeper lives where the honey-flow is light, but perhaps prolonged, he will find it more profitable to allow his bees to build their own combs. If he can't get perfect brood-combs, he certainly can allow bees to build their combs for the surplus comb honey. If honey comes in 'floods,' as it sometimes does in some localities, the man who allows his bees to build their store combs unaided at such a time, loses dollars and dollars."

Do Bees Freeze?—Askt whether bees may not freeze to death outdoors when the mercury sinks to 30° below zero, Doolittle says in Gleanings they may starve but never freeze. A small cluster may freeze, but not a whole colony. Quinby said that the bees inside the cluster, on a zero morning, could fly as readily as in July, should the cluster be suddenly thrown apart. Gallup, when in upper Canada, said, "The thermometer for 60 days in succession was not above 10° below zero, and for eight of these days the mercury was frozen; yet my bees, in box-hives, with a two-inch hole at the top, and the bottom plastered up tight, came through in excellent condition." (American Bee Journal, Vol. 5, page 33.) Doolittle finds in the hive, with the bulb of the thermometer touching the outside of the cluster, a temperature of 45° to 46°, and in the center of the cluster, 63° to 64°, when it is 10° to 25° below outside.

CONVENTION PROCEEDINGS

Report of the Northwestern Bee-Keepers' Convention, Held in Chicago, Nov. 10 and 11, 1897.

REPORTED BY A SPECIAL BEE JOURNAL REPORTER.

The assembled bee-keepers were called to order at 10:45 a.m., in the New Briggs House, Chicago, by George W. York, who had issued the call for the meeting. Dr. C. C. Miller was then chosen President, after which Mr. York was selected as Secretary.

On motion of Jas. A. Stone, a committee was appointed to draft a constitution and by-laws for the consideration of the meeting. Motion carried, and Messrs. Jas. A. Stone, Herman F. Moore and George Thompson were appointed.

During the meeting the following had their names enrolled as members, not all present, however, uniting :

M. M. Baldridge,
E. J. Baxter,
Dr. H. Besse,
Miss Mathilda Candler,
Stoughton Cooley,
P. W. Dunne,
J. D. Everett,
Jas. Forncrook,
Jas. A. Green,
D. S. Heffron,
Chas. Karch,
A. H Kennan,
L. Kreutzinger,
W. C. Lyman,
C. E. Mead,
Dr. C. C. Miller,
M. S. Miller,
Herman F. Moore,
John Nau,
W. H. Norris,
H. A. Rittenhouse,
Rev. H. Rohrs,
E. F. Schaper,
C. Schrier,
W. N. Smith,
W. H. H. Stewart,
Jas. A. Stone,
George Thompson,
J. C. Wheeler,
E. Whitcomb,
George W. York.

As had been the usual custom of conventions held in Chicago, the hat was past by the Secretary for the collection of questions for discussion. The first one read by Pres. Miller was this :

THE DIVISION OF LABOR IN THE HIVE.

"What is the division of labor in the hive, that is, the proportion of field-bees, nurses, sentinels, etc.?"

Pres. Miller—I don't think that is a question we should spend much time on.

Mrs. Taylor—I am responsible for that question. I am a novice in bee-keeping. It is a question that has interested me very much, and I have not found any books that have given me any light on the subject, and I thought possibly some people here might answer it in a few words.

Pres. Miller—It is a proper question, but one we should not spend much time on. We have our text-books and bee-papers that cover certain ground, and when we come here we take the ground they don't cover. Suppose I make a statement about this. In the first place, I don't know much about it. In the economy of the hive there are those different divisions—the field-bees, the nurses, etc. I very much doubt if there is a separate class as sentinels. There are those who do the home work, and the sentinels are amongst them. I think the nurse-bees and the sentinels are the same ; they do the work of the hive up to 16 days, usually, but under stress these nurse-bees will go to work as field-bees much earlier. I have seen them at five days old doing field-work, and I know the old bees will do nurse-work if there are no young bees in the hive, but as to the proportion, the proportion of nurse-bees will be, in the earlier part of the season, very different from what they will be later ; as they go on the nurse-bees will increase very rapidly up to about the time of the harvest, then they get maximum, and after that the field-bees will increase ; that is a very rough statement, and there is not much information in it, and may be it is not true ; correct me if it is not.

Mr. Stone—It seems to me that that is altogether according to the amount of brood there is in the hive to be kept warm, to use it plainly; and sometimes, when there is a hive full of honey, and only a little brood, it does not take as many bees to keep the brood warm as it does at other times. Of course, as you say, it is a good deal owing to the weather. I have noticed where the weather is very hot, if the bees are not doing much work, they go out of the hive because it is too warm, and then they certainly don't need many nurses; but in the cold weather, at the beginning of the season when their heat is needed in the hives, I think there is always enough stay in there to keep the heat, and the others go out and do the field work.

Mr. Baxter—I have kept about 250 colonies for the last 20 years, and my experience is that you cannot tell definitely at any time how many or in what proportion—it depends upon the weather and flow of honey. When the weather is warm they often go out of the hives because it is too hot. Different conditions have got to be taken into consideration. I don't believe any one answer will answer the question for all.

Pres. Miller—One point I am waiting for somebody to bring out is this : As it is now, the nurse-bees depend entirely upon the amount of heat that is needed to be kept up in the hive ; you are leaving out altogether the number of brood to be fed ; that I think controls it very largely. If it is warm, they will go outside, it is true, and no matter how hot it is there must be nurse-bees enough to do all the work that is in there, so you must take that along with the heat of the hive.

LEGISLATION TO PROTECT AGAINST ADULTERATION.

"What legislation is needed to protect consumers against adulterated honey?"

Pres. Miller—How many of you think that legislation is needed at all with regard to it? Hands up. (7.) How many think there is no need of legislation? (3.) As I understand the question, it is, What legislation is needed? It depends something on what the kind is.

Mr. Dunne—It seems to me we ought to have legislation from Congress, exclusive of the State, because Congress could naturally control the correction of all abuses, and legislation from Congress would naturally send it back from the States, and we would have still further legislation. I think that is a very important factor with regard to any man who produces honey.

Mr. Baxter—I believe with Mr. Dunne, that we need National legislation. I hope that this association is not going to put itself on record as did the National Association. If you remember, during the Columbian convention there was a measure before Congress known as the "Paddock Pure Food Bill." I moved to endorse the passing of that Bill, and I believe it was referred to a committee to report back, and strange to say they fought my resolution, and failed to report back. It went by default. The proceedings of the association still show that much of it, and I think the society made a big mistake. We should take strenuous measures of all kinds against adulteration ; we ought to have National laws ; one State will prohibit, and another State, to make money out of it, will allow it ; all those laws should be National.

Mr. Stone—I was going to ask Mr. York to report what he thought of our law that we had past last year in our legislature, with regard to pure food. It covers all food. As Mr. Baxter spoke of their shipping it from one State into another, our law does not allow it even to be sold if there is any ingredient that enters into any food that makes it impure. It contains a severe penalty.

Mr. Dunne—The beef exported, pork exported, all goes under the microscope, and is thoroughly examined by the Government ; if there is an inspector at all, in the principal markets in honey, this thing could be stopt, because it would have to be analyzed. You take it in the English ports—everything that goes in there is examined, analyzed ; every class of goods goes before the chemists, and is thoroughly examined at the expense of the Government, and the Government has the right to protect the farmer if he protects any one.

Mr. Moore—I feel very deeply interested in this question, because I have been in this market six years, selling honey to consumers. Illinois is all right ; it doesn't need anything. I think the extreme penalty for violation of the law is up to five years in the penitentiary, and it requires the ingredient, if not pure, to be printed upon the label in every case. The law is very stringent in Illinois, but as any one knows, who knows anything about politics, it enters in all these markets, and it becomes finally a question whether it will be enforced. The law is strict enough, if it could be enforced. The General Government should take hold of it ; it seems to enforce its laws more impartially than the local laws. I believe that that is the only remedy for adulteration. Adulteration is a great damage to every bee-keeper, and I can tell you so from my own experience. I askt one of the prominent citizens of Chicago, who has paid me considerable money for honey, "How much more honey do you buy than if you went to the store and bought it?" He replied, "Four or five times as much." My honey is pure honey ; I tell them so, and get an order instantly. It means four or five times as much honey sold, if people could understand the honey they get is always pure honey.

Pres. Miller—Let me tell you one thing as an illustration bearing upon this point. I live in a little town that has been without saloons for more than 30 years, but liquor is sold in it on the sly. Those who sell liquor have no permission from the town or from the State, and they are doing a crime when they are doing it. They don't take the trouble to look out for the State or town, but they do look out for the General Government and get a United States license; they are criminals in the eyes of the State law, but in the eyes of the General Government they are law-abiding citizens; in that case, at least, the General Government has a power, and law breakers are afraid of it; they are not afraid of State or county laws, or town laws.

Mr. Baxter—I was in Iowa last winter, and saw some very nice, presumably honey, in pound glasses. I askt the wholesaler if he didn't want to buy a barrel of honey at a low price, pure honey. I told him I had seen some of his honey in pound glasses in a grocery store. He said, "That is not honey." I told him he had it labeled "pure white clover honey," and that he was doing a wrong to bee-keepers and the public, and he said, "Everybody does that." I told him the first thing he knew we would have proceedings instituted against him for obtaining money under false pretenses. "I don't believe you can do that in Iowa," he said.

Mr. Stone—I would like to ask Mr. York if the United States Bee-Keepers' Union is not likely to take hold of honey adulteration, especially in the city of Chicago, and apply the State law, and make it effectual?

Mr. York—Yes, they will, just as soon as we have sufficient funds to begin operations, and that is all we are waiting for—for a sufficiently large membership (which means sufficient money in the treasury) to warrant us in going ahead. The laws of Illinois are sufficiently strong, I think, to stop adulteration if they are once enforced. I think we are indebted to Mr. Moore for resurrecting the laws, and I should judge from the reading of them that they were all we need to stop adulteration in this State. I, for one, should like to see them enforced, and am very well satisfied that just as soon as we have a large enough fund in the treasury of the United States Bee-Keepers' Union we will begin to make an attempt to enforce laws against adulteration of honey in this State as well as elsewhere.

Mr. Baxter—Your law is a failure, if that is the case—if you have to have funds provided. You have a prosecuting attorney here—can't you proceed under that? If you have to have private funds to prosecute criminals, I think the law is a failure.

Mr. Dunne—This question brings us back to the fact that it is the United States that has a right to be at the expense of enforcing the laws; they do with the distilleries. Has not the honey-man the same right to have the protection of the United States that the distillery has? Is Mr. Armour to be protected by having his pork analyzed and branded by the United States Government as pure, and the honey-man to have no protection? It only requires an effort on the part of the bee-keepers of the United States to enforce the law, and you will have the same right as other citizens, because the Government has the right to protect this industry as well as any other industry. We are all citizens alike, and if honey can be adulterated the same as whiskey, they owe us the same protection. The distillers don't amount to 500 all over the United States, but the bee-keepers amount to thousands, and I claim it is the duty of the Government to protect this interest as well as any other. It will be our own fault if we don't get legislation that will protect it. The Government puts the stamp of the purity of the whiskey on the bottle; that is in the interest of the distiller and the Government; and the Government can have an office here just the same; put a tax on to pay for it, and let there be a depot and have honey inspected; then you will get value for pure honey.

Mr. Karch—I don't think Mr. Dunne makes the proper distinction between whiskey and honey. Adulterated honey will not kill quite so quickly as whiskey. (Laughter)

Mr. York—I would like to say one more word in referring to what Mr. Baxter said, that we ought not to be compelled to spend our money to enforce State laws. I don't think that we need to spend the money for the purpose directly, but we must be to some expense to have our General Manager and Treasurer come on the ground, to engage an attorney to start the case, to look after samples, to have them analyzed, etc. That all costs something. Still, if it were known that the United States Bee-Keepers' Union has a good fund back of them, and that they propose to fight this thing through, we might not have to spend our money to enforce State laws, but it is a good thing to have it on hand. I presume we could get the prosecuting attorney to take hold of it, but there would be some expense to start the suit; at least that is the way I understand it. I am not an attorney, but I understand there would be some expense in beginning suits of that kind.

Mr. Moore—I am perfectly familiar with legal matters here in Chicago. I will tell why it is necessary to put up the money. There are 500 prisoners in the county jail, and Mr. Deneen (the State's Attorney) is in duty bound to get those 500 men out of jail or into the penitentiary as soon as possible. In the second place, whenever railroad men want a scalper sent to the penitentiary, they hire Attorney Forrest, or some other eminent attorney, at great expense. I could name many other instances. It is the State's attorney's business, of course, to do this, because it is the people's prosecution, but he is so busy, and the question of politics may come in; he does not have time, so it seems to be an absolute necessity to raise some money, $1,000 at least, before anything adequate can be done in Chicago. This $1,000 is to pay for the expense of getting samples of honey, and paying an attorney to do it. I would like to hear from Mr. York a little further.

Mr. Baxter—I think if we had a United States pure food law under the supervision of the Department of Agriculture, or under the Internal Revenue Bureau, if there is a tax to be assest (altho I don't favor that), I think we would be very apt to get justice more speedily, and it would be general.

Pres. Miller—Do you want to take any action upon this, or shall we pass on to the next question?

Mr. Baxter—I would introduce a resolution that it is the sentiment of this association that a United States Pure Food Bill be past by Congress.

Motion seconded by Mr. York.

Mr. Baxter—I should say we are not prepared to draft such a Bill now. I think the proper way would be to refer that to the Executive Committee of the United States Bee-Keepers' Union. I think they would have better recognition than we would.

Mr. York suggested that we recommend that the General Manager of the United States Bee-Keepers' Union draft a proper Bill to be past by Congress, and moved this as an amendment to the former motion, to which Mr. Baxter assented.

Mr. Baxter—My motion is that it is the sentiment of this association that we have a United States Pure Food Bill, and that we recommend the Manager of the United States Bee-Keepers' Union to draft such a Bill as regards honey, at least.

Mr. Dunne—Who is going to draft this Bill? Where is it to go?

Pres. Miller—As it now stands it would be referred to the General Manager of the United States Bee-Keepers' Union, and I think that you would find that he would do his level best.

Mr. Dunne—I would like to add in that recommendation that we recommend that all adulterated honey be seized and destroyed forthwith.

The motion was then carried unanimously.

(To be continued.)

A New Binder for holding a year's numbers of the American Bee Journal, we propose to mail, postpaid, to every subscriber who sends us 20 cents. It is called "The Wood Binder," is patented, and is an entirely new and very simple arrangement. Full printed directions accompany each Binder. Every reader should get it, and preserve the copies of the Bee Journal as fast as they are received. They are invaluable for reference, and at the low price of the Binder you can afford to get it yearly.

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 20 cents; 100 for 35 cents; or 200 for 60 cents.

The Names and Addresses of all your bee-friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums we are offering. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.

☞ See "Bee-Keeper's Guide" offer on page 14.

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EDITORIAL COMMENTS

Volume XXXVIII of the American Bee Journal is now begun. Just two more years, and then the two-score volume will be commenced. Then it will have been a weekly just as long as it was a monthly bee-paper. But 38 years seems a long time for a periodical to exist—it is especially so in bee-journalism, for about all that have been started in this country past away at a very tender age. Perhaps it was just as well, as they may have in most cases served their purpose, in satisfying the desire of their publishers to "have their say" uncheckt, and see their names in print as "editor." But how empty are such privileges and honors. To publish a really valuable bee-paper means more than to wield a free lance and print "editor" after your name. It means a lot of downright hard work, with no prospect of a financial fortune at the end. But, to us, the work is pleasant and agreeable, even if prodigious, so long as we are blest with good health.

◆

Against Adulterated Honey in Wisconsin.—We learn from Mr. F. Wilcox, the able President of the Wisconsin State Bee-Keepers' Association, that on Jan. 1, 1898, the new anti-adulteration law, which is very stringent, went into effect. Mr. Wilcox wrote us as follows Dec. 20:

> EDITOR YORK:—I will enclose you herein a clipping from the Evening Wisconsin, of the 13th, which shows that the State of Wisconsin is making an effort to suppress the adulteration of food and drugs, and I think the Governor has found a man who will enforce it, in the person of Hon. H. C. Adams, whose office our society occupied last February, when you were with us.
>
> Very truly yours,
> F. WILCOX.

The clipping which Mr. Wilcox sent us is headed, in large type, "Food Must be Pure." It contains a full text of the new law on adulteration, which was approved April 2, 1897, and also a number of rulings of Commissioner Adams. Under "Honey" we find the following:

> "Honey containing glucose or any other foreign substance shall be markt upon the package or parcel with the words, "Adulterated Honey," as required by Section 2, Chapter 40, laws of 1881. No honey mixtures or compounds will be permitted, except when labeled in accordance with the foregoing section."

Hurrah for Wisconsin! Go for the infernal adulterators of honey! Down them, and make them quit or get out. We hope the bee-keepers of that State will back up Commissioner Adams in his efforts to enforce the law. He'll have a job of it for awhile, and will need the hearty co-operation of every honest citizen. Now is the golden opportunity of bee-keepers there to rid that State of the honey-adulterators.

Oh, that Illinois were as quick to defend and protect her producers of honest honey. But we're expecting shortly to have something very interesting to tell along this line here in Chicago. Honey adulteration here is more general than ever, and more daring in its devilish work.

◆

Honey-Vessels in Foreign Countries.—Ph. J. Baldensperger says in the British Bee Journal that in most countries on the continent except Turkey and Greece, wooden barrels are used for holding honey. In Turkey and Greece goatskins are used, giving a peculiar and not agreeable flavor to honey. In Syria, Palestine, and over the north of Africa, unglazed pottery is used, the honey soaking into the pores so the vessels cannot be used the second time, but in Algeria glazed pottery is used. Mr. Baldensperger uses kerosene cans, after cleansing them. This he does by exposing them to the sun for a fortnight, or washing them with lye, "and, when well dried, a few drops of spirits spread over the surface and ignited with a match, and the can becomes as clean as new, without the slightest trace of petroleum flavor." But such cans are strongly objected to in this country.

◆

Bees vs. Pigeons as Message-Carriers—Mr. A. Maebert, a New Jersey subscriber to the Bee Journal, has kindly sent us an account of an hour's contest between homing pigeons and bees, in which the bees won the race. It was in Belgium, where the speed between four drones, eight working bees, and the same number of pigeons, was tested. They were liberated at a town one hour's distance from the hives. The bees were covered with flour so as to recognize them when they reacht the hive. The bees and pigeons were all liberated together. A drone reacht home four seconds in advance of the first pigeon. The three other drones and one pigeon came in neck and neck, according to the judges, and the eight worker-bees came in just a trifle ahead of the ten pigeons.

◆

Mr. J. M. Young and Apiary are shown on the first page this week. When sending us the picture, Mr. Young wrote as follows:

> Our photographer came out early in May and took the picture that I send you. The hives all face the east. The trees in the background are box-elders, and on the north side of the yard. The residence is situated at the extreme left, and, sorry to say, we could not show it in the engraving.
>
> The large white hives are chaff hives, and all two-story. The smaller hives are the two-story regular dovetailed, and used mostly for extracting purposes. My name at the left is workt out in honey-comb, and is the same one that was sent with the advertising train that went from Omaha across the

continent a few years ago. I have also had it on exhibition at the Nebraska State Fair, and at our county fair a time or two.

The small hive in the foreground with a handle is a shipping nucleus hive, used to ship nuclei in. They go by express just about like a traveling man's grip-sack.

J. M. YOUNG.

It will be very appropriate to add right here that Mr. Young just recently—Sunday, Dec. 19—took unto himself an apiarian helpmeet, in the person of Mrs. Martha E. Palmer. Life now will likely be sweeter than ever to our "Young" friend. The newspaper item announcing the "tie-up," closed with this paragraph:

> "The happy pair are both well known and highly esteemed in this community, where they have resided for years, and their many friends will wish them a joyous and successful voyage on the matrimonial sea."

Yes, when things get *too* quiet they can let loose a few healthy bees to liven up the "voyage," and help themselves to the honey from their own hives to sweeten the sour places.

* * *

No "Injustice" Whatever.—Dr. C. C. Miller sends the following in reference to a statement contained in the article by Thomas G. Newman, publisht recently:

> On page 807 (1897) Manager Newman says: "Dr. Miller's retraction is all right. But had I not learned of the statement having been made that the National Bee-Keepers' Union had given no aid to Dr. Besse—what an *injustice* would have been done!" If Mr. Newman had full knowledge of all the circumstances he could hardly think so. It must be remembered that Dr. Besse was *present* when the matter was mentioned, and that I referred to him to know what were the facts in the case. Of course, *all* present heard his reply, so I think Mr. Newman can see that no injustice could be done to him in the mind of any one present, and that his hearing of it could not change the least what any one present thought.
>
> C. C. MILLER.

Exactly so. The convention report will show, when it appears, that Dr. Besse *then* and there corrected Dr. Miller's erroneous impression regarding the Union's aiding Dr. B. in his suit. Of course no "injustice" could have resulted under the circumstances. It now looks very much to us that there was some one present who wanted to stir up trouble, and so made a donkey of himself by reporting a thing that has simply resulted in "much ado about nothing."

* * *

The Grading of Comb Honey is a subject that *must*, sooner or later, be taken hold of in good earnest, and something definite be done about it. We were looking at some comb honey on South Water street recently, and were told that it was "fancy." It did look so, judging by the front row back of the glass. But we wisht to see the inside of the case, and upon opening it we found unfinisht, dark-colored combs that never should have been sent away from home at all.

We then thought, Why will any one who calls himself a bee-keeper sort his honey in that way? Is it possible that he knows no better? If we knew the producer's name we should be tempted to publish it. He deserves to be held up in some way so that he will never repeat his inexcusable blunder.

But there are many other honey-producers just like that one. He is by no means alone in his careless—shall we say dishonest?—sorting or grading. Only the very finest and whitest, best filled and cleanest sections of honey find ready sale these days. There is no need to expect any kind of satisfactory price for inferior and dark grade of comb honey, at least in this market.

Our opinion is that only the very best of any farm produce is good enough to ship to market. Only on such goods can the highest prices be realized.

THE WEEKLY BUDGET

"'BEEDOM BOILED DOWN' is the heading of a most excellent department in the American Bee Journal." So says Editor Hutchinson in the Review. He ought to be a good judge of such things.

MR. JOHN BODENSCHATZ, of Cook Co., Ill., recently sent us a picture of his neat little apiary. Mr. B. is a very young bee-keeper, but he is on the way toward making a good one. He no doubt will be heard from later.

MR. C. H. CLAYTON, is now manager of the California Bee-Keepers' Exchange, we learn from the Pacific Bee Journal. Since his selection, it is said that "a number of cars of honey have been moved at very good prices, white extracted bringing 4½ cents per pound."

MESSRS. CHAS. DADANT & SON, writing us Dec. 21, and referring to the new year, said:

> "This makes our comb foundation business 'of age,' and our settlement here 34 years. We are getting to be 'old settlers.'"

MR. A. MIDDLEBROOK, of Lenawee Co., Mich., wrote us this when ordering a supply of the pamphlet, "Honey as Food," after having examined a sample of it:

> "'Honey as Food' I believe to be just the thing. Without any flattery to you, I must say it is well gotten up."

MR. HARVEY FEATHERS, of Waupaca Co., Wis., writing us Dec. 28, said:

> "I have taken the American Bee Journal ever since it has been printed weekly, and like it very much."

As the Bee Journal was changed from a monthly to a weekly Jan. 1, 1881, Mr. Feathers has been reading it just 17 years. He should be competent to speak of its value to a bee-keeper.

MRS. MATE L. WILLIAMS, of Wadena Co., Minn., has kindly mailed us a generous sample of the honey which we referred to awhile ago, and which she calls "the finest in the world." It *is* fine. We never tasted finer flavor, for a light amber honey. And for body—well, we never saw any honey so waxlike. Not beeswaxlike, but just waxy and stringy. Mrs. Williams may well be satisfied with her honey, and her local customers ought to be many and admiring. Thank you, Mrs. Williams, for your kind remembrance.

MR. E. S. LOVESY, of Salt Lake Co., Utah, lately sent to us two sections of comb honey and a pint Mason can of extracted. We believe that all was the whitest honey we ever saw, and it was also exceedingly thick and rich. We imagine it was sweet clover mixt with alfalfa, which made a delicious honey, indeed. For such honey there ought to be large demand and ready sale. We wish to thank Mr. Lovesy for his thoughtfulness and generosity. But it's just like those Utah people. It's a way they have. So our brother reports, who had been spending a month in Utah, and brought the samples of honey to us.

MR. J. W. SOUTHWOOD, of Huntington Co., Ind., in an article in Gleanings, had this very complimentary paragraph in reference to our new department of "Beedom Boiled Down:"

> "It occurs to me that the one who boils down 'beedom' for the American Bee Journal must stand by nearly all the time and stir, as it seems to be boiled down pretty thick, and yet not scorcht."

You are quite right, Mr. Southwood, for—

The Boiler boils and also stirs
The stinging, seething mass;
Then skims it oft, and still avers
'Tis yet but second-class.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Golden Italians and Adel Bees.

1. Last season I purchast a "golden" queen from a Southern breeder, thinking I would get something fine in color, but her workers are but a trifle more yellow than my hybrids. Would you consider her a pure-bred 5-bander?

2. Is there such a thing as a real yellow worker? If so, where can I get them?

3. Are the golden workers as good honey-gatherers as the common Italians?

4. What do you know about the Adel bees? Are they a superior race or strain? AU.

ANSWERS.—1. Hardly. Of course it makes a difference whether it was a tested queen or a dollar queen. In the latter case you have to take the risk as to her mating, and if she met an inferior drone you might expect workers accordingly, altho some of them ought to be yellow. Possibly it may be well to mention that often there is a possibility of there being another queen in the hive, your yellow queen having been killed. If you had clipt her, it would be easier to detect any such occurence.

2. Yes, there are workers that are as yellow to the tip of tail as the pure imported Italians are for the first three bands. I think G. M. Doolittle originated such a strain, and they can be had from him and others.

3. I think that's a good deal like asking whether a red cow is as good a milker as a black one. There are good and poor cows of each color. There ars good and poor bees among the regular Italians, and so there are among the 5-banders.

4. Practically, I know nothing about them.

Using Old Combs or Foundation in Transferring.

Would you fasten old combs into frames in transferring, or would you transfer onto full sheets of foundation? OHIO.

ANSWER.—It will make a nicer job, and perhaps more satisfactory in the long run, if you use the foundation. If, however, you transfer at a time when there is much brood in the hive, it will be advisable to save all comb containing worker-brood. There's no objection to your filling frames with worker-brood as far as it goes, and then having the rest of the frames filled with foundation.

A Beginners' Questions—Some Good Advice.

1. Please name plants which are especially adapted for honey, and of whom could I get the seed?

2. Describe a queen-cell, what part of the comb it is on, and about what size it is.

3. How can I tell brood which is fit for queen-rearing? Will uncapt brood do?

4. Will brown or black bees make any difference with the blood of a queen if eggs from a tested Italian queen are given them to rear a queen from? or must I have Italian bees?

5. I have a weak colony of Italian bees, and I do not wish to double them up. They seem to be on top of the frames some. Could I not give them some meal on a thin board over the cluster, and also feed them honey or syrup to cause the queen to lay? They are in the cellar: I think it is about the right temperature for increasing. NEW YORK.

ANSWERS.—1. It would take more room than can be given in this department to name all the honey-plants, and it would be well for you to get a text-book on bee-keeping, which would give you much information on this topic and many others. Get a bee-book, by all means. Among the best honey-plants are white clover, white sage, linden, sweet clover, Alsike clover, buckwheat, raspberry, Spanish-needle, heart's-ease, etc. The seed of those which are raised from seed may be obtained of seed-dealers almost anywhere.

2. A queen-cell may be found anywhere almost in a hive, oftener at the lower part of the combs, and looks very much like a peanut, and pretty much that size, altho some cells are very inconspicuous, especially if by accident or otherwise the bees have lost their queen. You're not likely to make a mistake in recognizing a queen-cell the first time you see it.

3. Bees can rear a queen from eggs or from very young brood. Some say the brood or larvæ should not be more than 24 hours from the egg, and that's perfectly safe, altho the same food is fed to both worker and queen for the first three days, so if the bees start with a grub or larva not more than three days old it is hard to see how it can be any better to take a younger one.

4. Scientists are not entirely agreed whether it makes any difference what kind of nurse-bees rear a queen, but in actual practice it is not generally supposed to make a difference. Get your eggs or larvæ from the right queen, then use any nurse-bees that are handy.

5. Now, look here, don't you try to rear young bees in winter. Let those bees die a peaceful death if they must die, and very likely they must if they're very weak, but don't stuff them with meal and syrup and things, to hasten their departure by giving them the diarrhea. Better change your mind and quietly lift the frames with the bees and put them in a hive with another colony, if you think they're too weak to come through as they are. But be sure you'll not make them stronger by trying to get the queen to lay in the winter. Instead of taking time to fuss getting the queen to lay, take the time to study a bee-book.

Giving Ventilation in Summer.

I have 150 colonies of bees. Nearly all of them were badly damaged last summer by the combs melting down. I had shade-boards on top and the hives raised off the bottom-board in front one inch.

Next spring I will bore a large hole in each end of the hives, and cover the same with wire cloth; also face each hive to the northwest, and put up an extra board to shade the southwest side. Can you give me a better plan, or suggest an additional remedy? WESTLEY.

ANSWER.—Have you no trees? Under the shade of a tree with free access from all sides for the air, there ought not to be much trouble if the hives are not shut up too close. Possibly your hives are close to buildings, high fences or something of the kind that doesn't allow the air free play. Raise the hive not only in front but all around. It will help matters a good deal to have the hive raised an inch on all four sides. Don't put wirecloth on the holes you make, for the bees will shut them up with bee-glue. If the holes are not opened till after bees have been flying well for some time they will not be used as entrances, and perhaps it would be no harm if they should be so used. Instead of making holes, perhaps you'd like this better: Move the second story forward so there will be an opening of ¼ or ½ an inch between the two stories at the back end. You may also move the cover so there will be an opening at the top. But this wouldn't do for comb honey.

Hive-Ventilation in the Cellar.

Speaking of cellar hibernating of bees, C. P. Dadant says: "Bees should be given a certain amount of upward ventilation," meaning, I take it, an opening of some sort at the top of the hive. I believe some say no top ventilation to the hive is desirable, as it takes off too much heat. I have 19 hives in the cellar, raised ½ inch off the bottom-board all around, but with the tops tight, as propolized by the bees. I aim to maintain the temperature at 40°, keeping the air pure. I would like some further opinion on top ventilation to hives. MINNESOTA.

ANSWERS.—It's right to have a certain amount of ventilation. It's right to have the tops of the hives sealed up tight as a drum. It's right to have the tops entirely open. It's right to have the bottoms entirely open. It's right to have the bottoms entirely closed. This is a free country, and you can do almost any way you like. But you can't have the hives entirely closed both top and bottom. Not unless you want to kill the bees. Before I had any movable-frame hives, I wintered bees in box-hives in the cellar, and they were turned upside down. That left them entirely open at the top, and entirely closed at the bottom. Later I wintered bees in frame hives in the cellar, with rather small entrances, and with an opening at the top at the back end nearly as much as the bottom entrance. Later still, being less trouble, I left the tops sealed tight, and gave a large entrance below. Either way is right. A few general principles must, however, be kept in mind. The air in the cellar must be kept good, for good air cannot be gotten into the hives if there's none in the cellar. There must be provision in some way for change of air in the hive. There should not be a strong draft through the hive. If the top is sealed tight there must be very free access for the air below, or the bees will suffer. It's an easy thing to have a hive closed up so tight that the bees will suffer for want of good air. If the air of the cellar is pure, of the right temperature, and there is no draft, it would be a hard thing to have a hive too open. Under such conditions a colony would probably winter well without any hive around it at all. As your hives are arranged, if dead bees are not allowed to clog any part, they ought to be not far out of the way, but a little more open wouldn't hurt.

You say you aim to keep the cellar at about 40°. Are you sure it wouldn't be better to have it a little warmer? The bees will try to keep the outside of the cluster somewhere in the neighborhood of 50°. If the cellar is 10° below that the bees must consume honey to raise the temperature, and if it's only 5° below they'll not need to eat so much. Generally it is considered that 45° is not far out of the way. But the best thing for you to do is to see at what point with *your* thermometer (there's a great difference in thermometers) the bees will be the most quiet. If they're more quiet at 40° than at 45°, then keep them at 40°.

A Question on Management.

On page 795 of the American Bee Journal for 1897, do I understand you to say that when you place the supers on the two-story hives, you would take the lower story away? Then what I want to know is, what would you do with the brood in the combs of that story?

INDIANA.

ANSWER.—Sometimes there will be 10 or 12 frames of brood in the two stories. If there's brood in only one story, there will very likely be only six frames, possibly five. When the one story is taken away from a colony that has more than eight frames of brood, it is left with eight frames of brood, and any colony that has less than eight frames containing brood has its deficiency supplied, so as to make every colony in the apiary have that number. If there are any frames of brood left, and they are not wanted immediately for any particular purpose, they are piled up on one of the weakest colonies, making it three or four stories high, and if one pile will not take them all, then more piles are made. These piles are convenient to draw from when brood is needed, to make new colonies or for any other purpose.

Partnership Bee-Keeping.

What would be a proper division of income of 100 colonies of bees, where one person furnishes the bees and all necessary supplies, and the other person does all the work connected with or necessary in caring for 100 colonies, and a third party acts as superintendent or instructor? What we want to know is, what should each person receive as his part of the gross income from the honey crop, the party owning the bees getting the increase from swarming?

NEW MEXICO.

ANSWER.—I don't know. Especially dense is my ignorance regarding the compensation or share the man should have who acts as instructor. If he should only give a passing word of advice now and then to a man who knew about as much as himself, he would not expect to get anything. If the man who took care of the bees knew so little about the business that the instructor had to be on hand all the time during the working season, he might hardly be satisfied with half the proceeds.

The other part is not so difficult, and yet circumstances vary so much that each case should be considered by itself. Perhaps in general, agreements are made to have an equal division between the owner and the apiarist, dividing both swarms and honey. If the apiarist gets no swarms, he ought to have more honey.

But the partnership business in bees is likely to lead to trouble unless there is a very clear and explicit understanding and agreement. And you can readily see that it may make a good deal of difference as to the skill of the apiarist. Suppose a man takes care of the bees who knows so little about the business that the bees do little but swarm, the honey crop not amounting to $100. Then suppose another man who is thoroughly skilled in the business, and under his management the proceeds amount to $1,000. You can readily see that it would not be fair to give one man the same as the other. True, the unskillful man would get small pay at best, but in the hands of the skillful man the crop would be to a certain extent the result of that skill alone, and if he understands the matter rightly he will hardly be willing to allow the owner of the bees much more than a fair pay for the capital and risk involved. So it's hard to make a single rule to fit all cases.

Several Questions from Washington,

1. I have a colony that has been carrying out young brood. I think it is caused by the wax-worm. Would you leave it until spring, or hunt it out now? The hive has a fast bottom.

2. In filling my chaff ticks I got a mouse in the straw, and I have set a trap in the super, baited with cheese, but it doesn't tempt it. How can I get it? It is in a fast-bottom hive, with crooked combs.

3. We had an abundance of white clover bloom and no honey this year. There are hundreds of acres of ground "slasht" and lying idle. Would it pay to scatter seeds of wild flowers over this ground? If so, where could such seeds be had?

4. Is foxglove poisonous?

5. Do bees visit flowers that hang down from the stems as readily as those that stand upright? The frequent showers in spring wash the honey from those that stand upright.

WASHINGTON.

ANSWERS.—1. Better let it alone till spring. The worm in the hive is bad enough. You'd be worse than the worm.

2. Change the temptation. Try meat of different kinds. Perhaps if the cheese is toasted it may suit his mouseship better. Possibly he might be more tempted if the trap was at the entrance. Traps cost so little that you might have one in the super and another at the entrance. If you get him to eat anything that is not in the trap, then you might give him another feast of the same with poison in it.

3. If there's no objection to scattering the seeds, it might be a good plan to sow sweet clover seed. Any seedsman can get the seed for you. Any other of the plants that you see put down as honey-plants in your bee-book might do, such as catnip, pleurisy root, Simpson honey-plant, etc.

4. No and yes. There's no likelihood that you will ever be poisoned by coming in contact with foxglove, nor that your bees will be hurt by its flowers, and yet a poisonous article—digitalis—is obtained from the leaves of foxglove.

5. Bees will readily visit a plant with flowers hanging down if only it furnishes a good supply of nectar.

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Send us $1.00 with a new name for the Bee Journal for 1898, and we will mail you your choice of the list below, to the value of 50 cents.

We make this offer only to those who are now subscribers; in other words, no one sending in his own name as a new subscriber can also claim a choice of this list:

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GENERAL ITEMS

Joining the New Union, Etc.

Enclosed find our membership fee to the United States Bee-Keepers' Union. Kindly let us have any circulars or information you have regarding the duties, etc., expected of each of the members of the Union, as we wish to do our portion of the work to down the adulteration of honey, as we consider ourselves situated in a good field to look into this question, owing to there being a great deal of adulteration carried on in and around New York City at the present time.

We produce considerable honey ourselves, but not enough to supply our trade; we therefore have to buy outside, and it is while doing this that we come across the adulterated article. The glucose question is one which is a source of great annoyance to us at times, especially when we find we are obliged to lose a sale by not being able to compete with the adulterated article.

We started out with the intention of selling only the genuine article, and intend to stick to this resolution right along. We find it a source of great encouragement to see how some of our customers appreciate what we are doing for them, once they reach that point where they feel they are dealing with honest people, and can rely on what we tell them regarding pure honey.

We hope the Bee Journal and the United States Bee-Keepers' Union may be successful in the lines of work they are undertaking, by trying to enforce laws against adulteration, and by keeping the bee-keepers out of the clutches of the dishonest commission-men. HOLDING BROS.

Hudson Co., N. J.

[The New Union has very little printed matter to send out as yet, we believe. But the General Manager's First Annual Report is now issued, and can be had by addressing Hon. Eugene Secor, Forest City, Iowa. —EDITOR.]

Two Seasons' Report.

Next spring it will be two years since I started in bee-keeping; and if I should look back over the past two seasons I would have to confess to many "follies" or "fool capers," (as our Rip Van Winkle puts it). But then I always take courage, because I am not the only one liable to have mishaps. but the generals and the captains in the army of beedom are as prone to err and make mistakes as the humblest private in the ranks. I find that experience and practice are the ablest teachers in making a bee-master.

I started in the spring of 1896 with 4 colonies of 3-banded Italians purchast in Indiana. They arrived May 10. I increast them, through natural swarming, to 10, which with a colony of blacks, that I transferred from a neighbor's old-fashioned box-hive, (he getting the honey and I the bees,) made 11 colonies. I got no surplus. I wintered them on the summer stands, without a single loss. I used 8 frame, single-walled hives surrounded with an outer case of hemlock, the spaces between being stufft with paper.

Starting with the 11 colonies, last spring, I increast them to 22. I workt exclusively for comb honey and have obtained a very fair crop. Buckwheat did not yield any honey, and all my surplus is white clover and raspberry in one-pound sections, and it is the whitest honey I ever saw. I believe that the majority of it is raspberry. I had a case of it at our county fair and it took first premium.

I prepared my bees, with the exception of 7 colonies, (which are in chaff hives) the same as last fall, only I used leaves instead of paper to fill out the spaces in the walls,

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We can furnish **White Alfalfa** Extracted Honey, in 60-pound tin cans, on board cars in Chicago, at these prices: 1 can, in a case, 7 cents per pound; 2 cans in one case, 6¼ cents; 4 cans (2 cases) or more, 6 cents. The Cash MUST accompany each order.

☞ A sample of the honey will be mailed to an intending purchaser, for 8 cents, to cover postage, packing, etc. We guarantee purity.

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the leaves being more easily had than paper.

The American Bee Journal has aided me greatly in the past, and I hope it will do the same in the future. May it prosper and flourish. GEORGE REX., JR.

Lehigh Co., Pa., Dec. 7.

Cypress Wood for Hives.

On page 745 I see the question: "Can cypress boards be used for bee-hives? If not, why?" And Dr. Miller's answer also: "Who can tell us?"

I believe I can. First, I will say I have no cypress timber, and am not in the lumber business. Yes, cypress can be used for hive-making in every part where wood is used, except sections. The objection to using it for sections is that it is too dark; again, it may not work so nicely at the corners.

Cypress is of several kinds, but only two are generally recognized here, then only as cypress and red cypress. The first includes many shades of yellowish tinge. The red cypress resembles red cedar, and sometimes smells very much like cedar.

All cypress (heart) works most beautifully into moldings, banuisters, scrollwork, panels, doors, windows, sash-frames, casings, and in fact all finisht work.

Cypress is of the first class where a timber is wanted that will resist rot the longest.

I have some bees, and now use Root's dovetailed hive. I have used cypress hives, and would use them again if I could get dovetailed hives made of it. It is light, durable, and does not warp easily.

A Mr. Hart, near New Orleans, recommends never using pine of any kind for hive-making; he even uses cypress for one-pound sections. I have used cypress brood-frames. JAS. O. BURNS.

Taugipahoa Co., La.

[This seems to show satisfactorily that in regions where cypress is readily obtained it may be a very satisfactory wood for hives. It is hardly worth while to test its adaptability in the North, for the ease of obtaining and subsequent cheapness must always cut a large figure. On that account pine will probably continue to be the wood for all hives made in the North.—EDITOR.]

Wintering Bees—Swarming.

I have two colonies of Italian bees which have stored about 50 pounds of honey since late in June. I bought one colony that swarmed June 14; I moved them 10¼ miles a few days after that; on the 24th they sent out a swarm that filled a new hive and a super as full as it would hold. They have workt nicely, and would undoubtedly have done better had I gotten them sooner. But now here I am at this time of year, and no cellar fit to winter them in. I am very anxious to get the two through safely, and must winter them out-of-doors. Their summer stand was in a cold place for winter, so I moved them to the south of a small shed, and covered them over with leaves, and covered the tops of the hives with sheaves of straw. I also put a board in front of the entrance so as to shade it, yet give ventilation. I took the super off, took the sections out, and filled the super with clean straw, and put it on in its place again before covering the hive with leaves.

Now I would like some bee-keeper who has had years of experience in wintering bees out-of-doors, tell me what he thinks of my plan so far, criticize it all he pleases, and then tell me what to do if it will not do as it is. The bees are all right now, or I suppose they are. They are alive, anyway, and the hives are as full of honey as they can hold. I did not weigh them, but I could not carry them with the supers on, and I can lift as much as the average bee-keeper, too, I'll guarantee. I don't think they will starve. The hives are 8-frame.

I askt some questions about preventing swarming last summer. One of your readers got it into his head that I did not want my bees to increase. He is very badly mistaken. What I meant by preventing swarming was some method of keeping the bees from getting away entirely, or settling on the top of some tree. I am willing to let them turn out a new swarm twice in a season, but I want to get it without climbing trees. H. J. WARNER.

Cedar Co., Iowa, Dec. 6.

[If you wanted to know how to keep swarming bees from settling on high trees, you wouldn't be likely to get much light by asking how to prevent swarming. You cannot prevent swarming without preventing increase at the same time, unless you resort to artificial increase. But preventing bees from absconding or settling on high trees when they swarm, is a much easier problem than the prevention of swarming. To prevent a swarm going off, clip the queen's wing. The bees may swarm out, and they may settle on a high tree, but they will not stay very long on the tree. When they find the queen is not with them, back they will come to the hive. The queen will of course jump off the alighting-board on the ground, when you will catch her, cage her, and when the swarm begins to come back have an empty hive ready in place of the old one for the bees to enter, and when fairly started to enter, let the queen run in.—EDITOR.]

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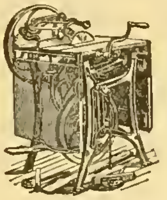
Please mention Bee Journal when writing.



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White Clover.....	.90	1.60	3.75	7.00
Alfalfa Clover........	.60	1.00	2.25	4.00
Crimson Clover.......	.55	.90	2.00	3.50

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Sole Manufacturer,
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330 Market St., - SAN FRANCISCO, CAL.
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Several Kinks in Bee-Keeping.

GETTING RID OF ANTS.—I have discovered several things in bee-keeping that have been of use to me, which may prove useful to others in the bee-business. Years ago the ants would make nests in the top of the hives to hatch their young. I sprinkled the cloth with strong brine that kept them out, but by accident I discovered a better way; I coopt up several hens with little chickens near the bees; they would run among the hives, and pick up the ants and cleaned them out. The ants only go in the top of the hives to hatch their young. It is a good, warm place, but they are around on the ground to get their food and the chickens pick them up.

PAINTING HONEY-BARRELS.—I extract all of my honey. I put it in alcohol barrels. I found that, drive the hoops the best I could, some of them would leak a little in hot, dry weather. I stopt it by painting the barrels all over the outside.

PREVENTING ROBBING.—I have seen in the Bee Journal that you must not have any honey exposed near the bees in extracting-time or it would start the bees robbing. As fast as I extract the combs I set them out in the boxes near the bees and let them clean them up. It attracts the bees away from where I am taking out the honey, and they won't bother but very little, and I have no trouble with their robbing. It keeps them from robbing. CHARLES INMAN.

Midland Co., Mich.

THE MONEY QUESTION
is easily settled by the poultry question. You can settle the poultry question by reference to our
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Contains 100 pages printed in finest colors, 30 varieties of poultry and how to treat them in health and disease and how to make money with them. Poultry house plans, recipes; postpaid 15c.
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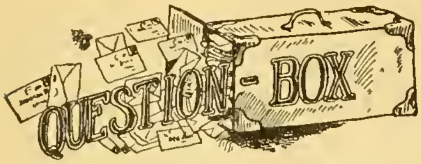
22Atf CHAS. MONDENO, Mgr.
Please mention Bee Journal when writing.



In the multitude of counsellors there is safety.—Prov. 11-14.

Position of Sections Over the Frames.

Query 65.—1. Do the sections in the supers you use run the same way as the frames in the hive, or across the frames?

2. Don't you think the sections will be finisht up better or be FILLED better, if they run the same way as the brood-frames?—EASTERNER.

Mrs. L. Harrison—1. Yes. 2. No.

W. G. Larrabee—1, Same way as the frames. 2. No.

R. L. Taylor—1. Yes, the same way. 2. I don't know.

E. France—1. The same way as the frames. 2. Yes.

Emerson T. Abbott—1. The same way. 2. I do not know.

J. M. Hambaugh—1. Yes, with the brood-combs. 2. Yes, I believe so.

Prof. A. J. Cook—1 and 2. I have used both about equally. I see no choice.

Rev. M. Mahin—1. They run the same way. 2. I cannot see that it would make any difference.

Jas. A. Stone—1. The same way. 2. I have always thought it the best way, but do not know as to that.

J. E. Pond—1. The same way as the frames. 2. Yes, most assuredly; at least that is my experience.

G. M. Doolittle—1 and 2. I use them both ways, and see nothing in favor of either as to better-filled sections.

Dr. C. C. Miller—1. Same way. 2. I don't see why it should make any difference, unless because the entrance is a freer.

Wm. McEvoy—1. Mine run the same way as the frames in the hive. 2. Yes, where my system is for working for section honey is followed.

Chas. Dadant & Son—1. They run with the frames. 2. It matters but little how they are turned, so the bees have broad access to them from below.

Dr. J. P. H. Brown—1 and 2. In some of my supers they run across the frames, and in others they run with the frames. I have never been able to detect any difference.

Eugene Secor—1. The same way as the frames. 2. I don't know about that. The reason I prefer them to be parallel with the frames is because I only have to level the hive one way.

C. H. Dibbern—1. The same way. 2. It is more convenient, owing to the shape of my hives, and also the only way I could place them, as I tilt the hive forward to make it shed rain.

G. W. Demaree—1. The sections in my section-cases run with the frames. 2. I don't know that their position in the hive has anything to do with the manner in which they are finisht by the bees, if the hive is level on its stand. But I want my hives a little low at their entrances to drain them, and in this case the section should run with the frames.

J. A. Green—1. Same way. 2. I do not think it would make any difference. The only objection I can see to having them run crosswise is that the hive must be leveled both ways, which is neither easy nor desirable.

A. F. Brown—1 and 2. My sections run parallel with the frames. For many reasons this is best. I do not think it makes much difference to the bees which way they run; they will fill them for me one way as well as the other.

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This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published today. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."

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Cupid's Dart sped through space,
Aimed with much precision;
Its target—in a conspicuous place—
Was pierced beyond recognition.
Cupid at once withdrew the arrow,
Fearful of the result of his aim,
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Perhaps you can do the same.

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45Ctf No. 995 Ruby St., Rockford, Ill.
Please mention Bee Journal when writing.

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45Dtf Please mention the Bee Journal.

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The Yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by and expert bee-man. Besides this, the paper also tells you all about **California Agriculture and Horticulture.** $1.00 per Year; Six Months, 50 cents. Sample Copies 10 cents.

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Convention Notices.

Ohio-New York-Pennsylvania.—The Northeastern Ohio, Western New York, and Northwestern Pennsylvania Bee-Keepers' Association will hold their annual convention at Corry, Pa., Jan. 12 and 13, 1898. An interesting program has been arranged. All are invited. ED JOLLY, Sec.
Franklin, Pa.

California.—The annual meeting of the California State Bee-Keepers' Association will be held on Monday, Jan. 10, 1898, commencing at 2 p.m. The California Bee-Keepers' Exchange will hold its annual session on Tuesday, Jan. 11 at 2 p.m. A full attendance of members is desired. Mr. Cowan, editor of the British Bee Journal, will be in attendance. Thos. G. Newman will also attend, health permitting. PROF. A. J. COOK, Pres.
J. H. MARTIN, Sec., Los Angeles, Calif.

See the premium offers on page 11!

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Ill., Dec. 13.—Fancy white 11 to 12c. No. 1, 10c.; fancy amber, 8 to 9c.; No. 1, 7c.; fancy dark, 7c. Extracted, white, 5 to 6c.; amber, 4 to 5c.; dark, 4c. Beeswax, 26 to 27c.

The demand for comb honey is not satisfactory, and it can be bought at even lower prices than quoted, where it is not in the hands of regular dealers. There seems to be no outside demand. Extracted without special change. Beeswax is scarce.

Milwaukee, Wis., Dec. 13.—Fancy white, 12 to 13c.; No. 1, 11 to 12c.; fancy amber, 9 to 10c.; fancy dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 4½ to 5c. Beeswax, 25 to 27c.

This market has been fairly sustained on honey since our last report. Values remain about the same, as there has been a very good consumptive demand, especially for extracted, while the comb honey has seemed to accumulate with increast receipts, and we feel to meet the demand even if at a reduction from quotations. There seems to be more demand from those who eat honey than in former seasons, which is a good feature of the trade which we desire to encourage. We are expecting a good trade from this forward.

Cleveland, Ohio, Dec. 15.—Fancy white, 12 to 12½c.; No. 1, 11 to 12c.; No. 1 amber, 9 to 10c. Extracted, white, 6 to 7c.; amber, 4 to 5c. Beeswax, 22 to 25c.

New York, N. Y., Dec. 22.—Fancy white 11 to 11½c.; off grades, 9 to 10c.; buckwheat and mixt, 6½ to 7c. Extracted, California white, 5 to 5½c.; light amber, 4½ to 4¾c.; white clover and basswood, 5 to 5½c.; buckwheat, 4 to 4½c; Southern, 50c. a gallon. Beeswax is in good demand at 25 to 27c.

Our market remains quiet. Fancy grades of white comb are about cleaned up, and these would find sale on arrival at quotations. We have a large stock of buckwheat, mixt, and off grades of white, and, as the demand for these is very light, we cannot encourage further shipments for the near future. Extracted of all kinds is selling fairly well.

Minneapolis, Minn., Dec. 15.—Fancy white, 11 to 12c.; No. 1, 10 to 11c.; fancy amber, 10c.; No. 1, 9½c.; fancy dark 9 to 9½c.; No. 1, 8 to 9c. Extracted, white, 5 to 6c.; amber, 4 to 4¾c.; dark, 4c. Beeswax, 23c.

Market holds firm at above prices. Good demand for extracted. Wax is quiet but firm at 23c.

Kansas City, Mo., Dec. 15.—Fancy white, 10½ to 11c.; No. 1, 10 to 10½c.; fancy amber, 9½ to 10c.; No. 1 9 to 9½c.; fancy dark, 8½ to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

St. Louis, Mo., Dec. 13.—Fancy white, 12 to 12 1-2c.; No. 1, 10 1-2 to 11 1-2c.; fancy amber, 9 1-2 to 10c.; No. 1, 9c.; fancy dark, 8c. Extracted, white, 5 to 5 1-2c.; amber, 4 to 4½c.; dark, 3 1-2 to 4c. Beeswax, 24 1-2 to 25c.

We would advise prompt shipments of honey. We do not see any probabilities of better prices. The stock of honey is ample for the demand.

Albany, N. Y., Dec. 13.—Fancy white, 12 to 13c.; No 1, 11 to 12c.; fancy amber, 8 to 9c.; No. 1, 8c; fancy dark, 8c.; No. 1, 7½ to 8c. Extracted, white, 5 to 6c.; amber, 4½ to 5c. dark, 4 to 4½c.

There is an ample stock of comb on hand and selling freely at quotations. Extracted is not plentiful and from information received there is not much in the hands of producers.

Buffalo, N. Y., Dec. 24.—Strictly fancy 1-pound comb honey is more active at mostly 10c. occasionally 11c., but all other gradas are dormant and have to be cut to almost any price to move them, ranging from 8c. down to 6c. Extracted is moving slowly at 5 to 6c. for fancy; dark, 4 to 4½c. A liberal quantity can be sold; and, of course, the low grades can be forced off for what they will bring, if owners cannot do any better.

There is no selling pressure of consequence on desirable lots of water white, either comb or extracted, such being held as a rule at full quotations. Amber grades are in greater supply than the demand and market for this class presents an easy tone. Dark qualities are in poor request, despite low asking figures. Beeswax is firm at correct quotations, with very little offering, either from first or second hands.

Philadelphia, Pa., Nov. 13.—Fancy white, 13 to 14c.; No 1, 12c.; fancy amber, 10c.; No. 1, 9c.; No. 1 dark, 8c. Extracted, white, 5 to 5½c.; amber, 5c.; dark, 4 to 4½c. Beeswax, 27c.

Honey is arriving very freely; market is a little off. Beeswax is in good demand.

Boston, Mass., Nov. 8.—Fancy white, in cartons, 13c.; No. 1, 11 to 12c.; fancy amber, 10c. Extracted, white, 6 to 7c.; amber, 5 to 5½c. Beeswax, 28c.

No. 1 and fancy honey has sold well during the past 10 days, but off grades and light weight is going slowly. Beeswax is in good demand and but little here.

Detroit, Mich., Nov. 9.—Fancy white, 11 to 12c.; No. 1, 10 to 11c.; fancy amber, 9 to 10c.; No. 1, 8 to 9c.; fancy dark, 7 to 8c. Extracted, white, 5 to 6c.; amber, 4 to 5c. Beeswax, 25 to 26c.

Indianapolis, Ind., Nov. 8.—Fancy white, 11 to 13c.; No 1, 9 to 10c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25c.

Demand for fancy white comb honey and fancy white extracted is exceptionally good, while there is almost no demand for dark or amber comb or extracted honey.

Cincinnati, Ohio, Dec. 22.—There is no change in prices, but rather a slow demand for the holiday season. We quote 10 to 14c as the range of prices for best white comb honey, and 3 1-2 to 6c., for extracted, according to quality. Beeswax is in fair demand at 20 to 25c. for good to choice yellow.

List of Honey and Beeswax Dealers.

Most of whom Quote in this Journal.

Chicago, Ills.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.
HILDRETH BROS. & SEGELKEN,
120 & 122 W. Broadway.

Kansas City, Mo.
C. C. CLEMONS & Co., 423 Walnut St.

Buffalo, N. Y.
BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.
CHAS. DADANT & SON.

Cleveland, Ohio.
A. B. WILLIAMS & Co., 80 & 82 Broadway.

Philadelphia, Pa.
WM. A. SELSER, 10 Vine St.
Mr. Selser handles no honey on commission

St. Louis, Mo.
WESTCOTT COM. Co., 213 Market St

Minneapolis, Minn.
S. H. HALL & Co.

Milwaukee, Wis.
A. V. BISHOP & Co.

Boston, Mass.
BLAKE, SCOTT & LEE., 57 Chatham Street.

Detroit, Mich.
M. H. HUNT, Bell Branch, Wayne Co., Mich.

Indianapolis, Ind.
WALTER S. POUDER, 162 Massachusetts Ave.

Albany, N. Y.
CHAS. McCULLOCH & Co., 380 Broadway.

Cincinnati, Ohio.
C. F. MUTH & SON, cor. Freeman & Central Avs.

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UNTIL FURTHER NOTICE, we will allow 28 cents per pound for Good Yellow Beeswax, delivered at our office—in **exchange** for Subscription to the BEE JOURNAL, for Books, or anything that we offer for sale in the BEE JOURNAL. **Or, 25 cts. cash.**

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FREE —A Copy of— **Successful Bee-Keeping,** by W. Z. Hutchinson; and our 1897 Catalog, for 2-cent stamp, or a copy of the **Catalog for the Asking.** We make almost **Everything** used by **Bee-Keepers,** and at **Lowest Prices.** OUR

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105 Park Place, is the street,

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Are YOU the man who wants to buy ?

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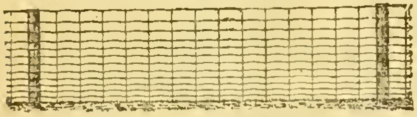

The Locomotive Engineer

must have an eye out for signals. One need not watch the thermometer on account of his Page Fence Rain or shine, fever heat or zero weather, "the coil is in it," and keeps it tight.

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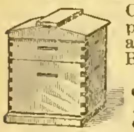

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Working Wax into Foundation for CASH **A Specialty,**

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Beeswax taken in Exchange for Foundation or any other Supplies.

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AUGUSTA, WIS.

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Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**

Cash for Beeswax. BELL BRANCH, MICH.

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21st Year **Dadant's Foundation.** 21st Year

Why Does It Sell So Well?

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38th Year. CHICAGO, ILL., JANUARY 13, 1898. No. 2.

BIOGRAPHICAL

MR. GEORGE S. WHEELER.

The following sketch of Mr. George S. Wheeler, of Hillsboro Co., N. H., was kindly written by Mr. H. A. Fish, who evidently is well acquainted with Mr. Wheeler:

The subject of this sketch was born in Hillsboro Co., N. H., on the farm where he now lives, as did his father and grandfather, who built the house over 100 years ago. The son, "George," had charge of the farm for several years before the death of his father, which occurred in 1892. Mr. Wheeler bought his first colony of bees in 1856. This colony was the center of attraction for a long time. When it was brought home it was set in a bee-house prepared for it. The hive was a box-hive, 12x12x14 inches, with a compartment on top for two 10-pound boxes of honey. Four dollars worth of honey was sold the first season, leaving enough in the brood-chamber for the winter. The cost of the bees was $5.00.

An Italian queen was bought of K. P. Kidder, of Burlington, Vt., some time in the '60's, for which $5.00 was paid. The next season some 20 colonies had queens introduced, reared from the Kidder queen, and about every bee reared from her queens showed three bands, and were as well markt as the old queen. When these queens took their wedding flight the yard was full of black drones, but Mr. Wheeler thinks the drones from the Italians must have mated with them all. But the next season, when about every drone in the yard was Italian, he could hardly get a queen but what would produce hybrid bees, largely black, so he later concluded that the *first* cross could not be told from pure Italians so far as stripes went, and he has never had reason to change that view.

Since Mr. Wheeler started with Italian bees he has never had over 50 colonies at one time, usually about 25. He has always had bees on the farm since 1856. The winter of 1868 found him in Mississippi, as foreman on a plantation, and being an expert at hiving wild bees, he soon had a section of a bee-tree in the yard. They swarmed twice in April, and were hived in hives similar to the one described in the beginning of this article. The natives thought a hive with glass in the back, and boxes on top, was a Yankee invention, and came from all parts to see the hives. There were many wild swarms in the woods then, and Mr. Wheeler found quite a number, and had lines of more that were never traced.

The most honey Mr. Wheeler has ever taken from one colony was 75 pounds, which was extracted with a Peabody extractor, which he has used for over 20 years. Mr. Wheeler has bought queens from all parts of the country, and is always looking for something new and better. He had seven swarms from one colony of Carniolans in one season. The old colony swarmed twice in May, and the first of June these two cast two swarms each, and the old one another in August. He had never before nor since seen a second swarm swarm the same season.

He uses the Alley queen-trap, and says there is nothing like it. In 40 years of bee-keeping he has never had but one swarm leave for the woods, and that was last year. They were hived four times, and then were put into a new hive containing combs and honey, and carelessly left without a queen-trap, when they started for parts unknown.

Mr. Wheeler showed me a place on a limb of an apple-tree in his yard, and said that there have been hundreds of swarms alight on that limb, and always in the same place.

Mr. W. believes that bees go a long way for honey, as he has seen Italian bees five miles from his farm, and no others were anywhere around; and I can vouch for that statement as I have seen them that far when I was hunting wild bees, and they had to go over a range of mountains to get home.

George S. Wheeler.

In 1896 I saw Mr. Wheeler's bees. He had a very few colonies, 13 I think, mostly very fine 3-banded Italians. I thought I would get some from him. In the spring he wrote me he had not a colony of them left. They died of dysentery produced by honey-dew or "bug-juice," as he calls it.

Mr. Wheeler reads all the bee-papers, and has been a subscriber to the American Bee Journal off and on since 1866, when Samuel Wagner was editor. He remembers when "Novice" (A. I. Root) first began to write on bees, and was very interesting.

When a small boy it was a treat for me to go up to the old Wheeler farm, and see the queer things to be seen there—the different breeds of poultry, both land and water fowl; China sheep, with their funny ears, the large stock of cattle, etc.; but those long rows of bee-hives were what seemed to interest me most. I would look at them, and it seemed to me like a village, as some of them were built in fancy shapes (the old American). I have counted almost a hundred at one time, and as I look at what there are now, it seems quite different.

Mr. Wheeler, whom I have known from my boyhood days to the present time, is a very pleasant man to meet, and is an interesting talker. Say "bees" to him, or "poultry," and you are "in for it." Out you go amongst them, and if you get away short of a half day you can do better than I can, or *want to*. His time in service, I think, entitles him to be called one of the veterans in beedom, and I hope to see some of his writings in the bee-papers, as they would be interesting and helpful. H. A. FISH.

CONTRIBUTED ARTICLES

Something on the Adulteration of Honey.

We have received the following from Hon. Eugene Secor, General Manager of the United States Bee-Keepers' Union, which every bee-keeper should read:

FOREST CITY, Iowa, Dec. 31, 1897.

MY DEAR MR. YORK:—I enclose a copy of three sections of the Iowa "Code," bearing on the subject of pure food, and naming the penalties for violating the provisions thereof.

In Iowa we have no pure food commissioner as is the case in some of the States. The enforcement of the law will rest largely with the people who are interested. I would like to have you publish the sections enclosed for the benefit of your readers in this State. I know of no better way to get the information before our bee-keepers.

You will notice that we have plenty of law on the subject of adulteration. It only remains for the bee-keepers in every community to see that its provisions are enforced.

If a groceryman is selling liquid glucose under the name of honey, call his attention to the law, and then if he does not quit it, have a sample of it analyzed, and if found to be adulterated, file an information before a Justice of the Peace under the advice of the County Attorney.

One such suit, if successfully managed, will drive the stuff out of a whole county. As a rule, grocers do not want to handle any article of food which is prohibited by law. If their attention is called to the matter they will, nine times out of ten, refuse to buy or sell it. I would not advise prosecuting every storekeeper who has been led to buy an adulterated article in ignorance of the law, until he has been notified. "Ignorance of the law excuses no man," but at the same time we can hardly expect every man to know *all* the provisions of an ever-changing code.

I hope, Mr. York, that you will call public attention to the laws in other States relating to honey-adulteration. Bee-keepers do not always have access to the laws of their own States, even.

Perhaps we have better protection than we are aware of.

Arrangements will soon be made, very likely, to have samples analyzed; but before sending them it will be necessary to take such precautions to identify samples if they should be used in court. A letter to me with a statement of the case will receive attention and advice how to proceed.

EUGENE SECOR,
General Manager U. S. Bee-Keepers' Union.

The three sections from the Iowa Code, which Mr. Secor sent, read thus:

LAW RELATING TO ADULTERATION OF FOODS—IOWA CODE, 1897

SEC. 4986.—No person shall mix, color, stain or powder any article which enters into the composition of food, drink or medicine with any other ingredients or material, whether injurious to health or not, for the purpose of gain or profit, or sell or offer for sale any article so mixt, colored, stained or powdered, unless the same be so manufactured, used or sold or offered for sale, under its true and appropriate name, and notice that the same is mixt or impure is markt, printed or stampt upon each package, roll, parcel or vessel containing the same, so as to be and remain at all times readily visible, or unless the person purchasing the same is fully informed by the seller of the true names of the ingredients (if other than such as are known by the common name thereof) of such articles at the time of making the sale thereof or offering to sell the same; but nothing in this section shall prevent the use of harmless coloring material used in coloring butter and cheese.

SEC. 4987.—No person shall mix any glucose or grape-sugar with syrup or sugar intended for human food, or shall mix or mingle any glucose or grape-sugar with any article, without distinctly marking, stamping or labeling the article or the package containing the same with the true and appropriate name of such article, and the percentage in which glucose or grape-sugar enters into its composition. Nor shall any person sell or offer for sale, or permit to be sold or offered for sale, any such food, into the composition of which glucose or grape-sugar has entered, without at the same time informing the buyer of the fact, and the proportion in which glucose or grape-sugar has entered into the composition.

SEC. 4988.—Any person violating any provision of the four preceding sections shall, for the first offense, be fined not less than ten nor more than fifty dollars; for the second offence, not less than twenty-five nor more than one hundred dollars, or imprisonment in the county jail for not more than thirty days; for the third or any subsequent offense, not less than five hundred nor more than one thousand dollars, and imprisonment in the penitentiary not less than one nor more than five years.

We think that Mr. Secor offers a valuable suggestion when he says that he thinks it would aid materially if bee-keepers would show a copy of their State law on food adulteration to every grocer who they have reason to think handles adulterated honey. We will try it here in Chicago, and report the result. But Chicago dealers are so accustomed to seeing few laws enforced, that we are not very sanguine as to being able to frighten them by simply *showing* them the law. The only thing that will touch the hardened law-breakers here is a severe enforcement of law, we think.

*

Honey-Consumption—Working Up a Demand.

BY MRS. L. HARRISON.

During the autumn and early winter I have been watching the consumption of honey with much interest. Near my home is a grocer doing a fair business. Early in the season he purchast two 12-pound cases of section honey, glast, and showing well, and kept it near the window in plain sight of all who past. It remained for weeks before the cover had even been loosened, and when I left home (Dec. 15) only a few sections had been sold from one case. Why? In another direction was another grocer with like experience.

Good grocers all over the city had a supply. Very white section honey, labeled "Mountain Honey," was quite plentiful, also pint Mason jars of the same kind, offered for 20 cents per jar. Honey could be purchast by consumers all the way from 8 to 15 cents per pound, but few apparently wanted it at any price.

While traveling from Peoria, Ill., to Mobile, Ala., most of the way during daylight, I saw but one small apiary, and by questioning passengers who got off and on along the route, I learned that but few colonies were kept, and those in a primitive way,

Mobile is an old Spanish city, and at the last census numbered 44,000, and has considerable trade. Large quantities of cotton comes down the Alabama and Tombigbee rivers, which is taken by steamers to Liverpool. Many commission houses handle large quantities of cured meats, flour, meal and distilled liquors. Vessels are arriving with cargoes of bananas and cocoanuts, while others depart laden with cotton, lumber, and mixt cargoes of merchandise.

I've been here at Mobile for a week waiting for a steamer to go to my winter home in Florida. Having leisure I visited many grocers in different parts of the city, enquiring for honey, yet I found none—not a section, and also sought for it at commission-houses. Grocers would say, "We do not handle it; it's very cheap; retails for 10 cents per pound, either in comb or liquid." One grocer said that he had liquid honey that he sold for 55 cents per gallon. I askt if it was Cuban honey? He replied that he did not know where it came from.

The market for honey has never been developt; it would be folly to ship it here until a demand has been created. A dealer in bananas told the writer that a vessel brought a cargo of plantains to this port, but there was no sale for them, and they had to be taken to another city.

Those who undertake to develop a honey market should expect to receive very small pay for their labor. Our country is a great country, and let a demand for honey be created, and quick as a lightning flash the news is spread, and a supply comes. Mobile Co., Ala., Dec. 25.

Various Notes and Comments.

BY J. M. YOUNG.

In continuing my notes to the American Bee Journal, for the present winter I will say that what I may write or advance will be as heretofore, directed to beginners and those like myself, thirsting after knowledge in apiculture. While I have been in this line of business more or less since 1870, I find that there is something to be learned almost every day. The bee-business is a trade to be learned and made up of many small matters, and to make a success of it financially, the apiarist must be informed. The carpenter, the machinist, the blacksmith, all learn something in everyday life, so will the apiarist.

GARDENING AND BEE-KEEPING.—For the last four or five years I have been running a small garden in connection with my bee-business, and from a financial point of view I find that they work together if carried on with the proper objects in view. For instance, take a season like the present one—a poor one for bees here, and a good one for gardening. Usually, when it is a good year for "garden sass," it is a good year for honey, but that dear old teacher, Experience, says that there are exceptions in all pursuits of life. Nevertheless, when it is true, when the cabbage and cucumbers and such truck need cultivating, the bees are wanting to swarm, or perhaps need a super of sections. Such will be the case, but if the bee-keeper is a rustler, gets up early in the morning, and works after he gets up, it will be surprising to see how much may be done before the night comes on.

Old Mother Earth has put on again (Dec. 31) her white winter robe by having three or four inches of snow spread over her beautiful surface. There have been all sorts of weather thus far this winter, the mercury having gone down to zero a time or two.

BROOD-FRAME SPACING-STAPLES.—I have been using and trying the past season the new short end staple improvement on brood-frames, and to make a long story short I will say that I don't like them. I condemned them in the start, from the fact that they are always getting out of place, or "bucking," to use a cowboy term, when the hives are being moved around.

BEES ALL RIGHT.—Are your bees all in good condition for winter, with plenty of stores to carry them through until apple-bloom? Nearly all of mine are in chaff-hives with plenty of upward ventilation, and honey to last them through, with a seasonable winter. I have a few in single-walled hives that may get their "ears" frosted.

NEBRASKA APIARIAN EXHIBIT.—Supt. Stilson, of the apiary department of the Trans-Mississippi Exposition at Omaha, has secured a large amount of honey from over the State that will be a fair sample of what Nebraska can do in the apicultural line. Mr. Stilson is a hustler, and nothing will be left undone to make a successful exhibit.

BEES UNDER SNOWDRIFTS.—About 8 in. of snow fell Dec. 3, making good sleighing for two days, then a warm wave swept over us, and took it off, or nearly so. I had a few one-story dovetailed hives that were covered up with the drifting snow, but it did not hurt the bees any. Of course, when it began to thaw I took a scoop-shovel and just went for those snowdrifts. No, sir, bees covered up in a snowdrift will be all right if it keeps cold, I don't care if there is six feet of snow on them, if the bees have plenty of good honey and a good, tight hive, with a good cover that doesn't leak. But look out for that thaw that usually comes sooner or later. Don't understand that I recommend this way of wintering, for there is not a bee-keeper living in all this western country, or in any country where snow falls, but will have some of his hives covered up with snowdrifts sometime during the winter months.

APIARIAN EXHIBITS AT FAIRS.—That report of the Buffalo convention is very interesting reading, but that part relating to exhibits at fairs I am afraid is too late to be put into force this fall, and before another fair time rolls around, the most of us will have forgotten all about it.

ALFALFA IN NEBRASKA.—I regret to say bees don't work on alfalfa very much in this neck of the woods, from some cause not clear to me. There was a patch near my apiary last summer on which I made some close observations during the blooming period. Farther west it is is said to be a good honey-plant, and considerable surplus is obtained.

THE NO-BEE-WAY SECTION.—That new honey-section that has lately come into use is precisely the same section that I used many years ago, the only difference being that they were then made to hold two pounds, and were dovetailed all around. I used to put 12 of those two-pound sections in a frame or rack made of common lath that rested right on top of the frames. I found that one of these racks was filled as quick, or quicker, than the 12-pound super that is used to-day. The only reason I can assign for this was that when the bees are once up in the super, and started in the sections, they will run down a two-pound box just as soon as a one-pound section, from the fact that there are more bees to do the work, and the heat is retained better.

MY REPORT FOR 1897 is not an encouraging one, by any means. In fact, I don't care to allow it to appear in print, only to give the reader a gentle hint as to what the average per colony would be. It would be putting it rather mildly to say that if the number of pounds was computed, it would not reach over 10 pounds per colony, spring count, including both comb and extracted honey. The prospects for the early honey harvest were flattering in every particular. The white clover began to bloom early and continued all the season, or as long as it lasted, even up to the first of July. When the basswood began to bloom, the bees were up in the supers, filling and storing as fast as they could, but two or three days of hot winds came and stopt proceedings, as if a thunderbolt had struck them. The supers were left about two-thirds finisht, or hardly so much, from that time on they (the bees) did comparatively nothing, only partly finishing a few sections, but leaving a greater part of the sections unfinisht. The basswood bloom only lasted a day or two, giving the bees only a taste, as it were. But from reports west of here, where alfalfa abounds plentifully, I am happy to say a moderate yield was obtained. The reason that no surplus was obtained from white clover was, the bees were reduced in numbers by spring dwindling, so that there was not a sufficient force of workers to obtain the honey that was going to waste in the fields.

ADVICE TO BEGINNERS.—Now is a good time for beginners to post up and read everything that they have received during the summer, and then you will be prepared to make arrangements for the next season. I find in looking over copies received during the summer, of the American Bee Journal and Gleanings (I take 'em both) that there are many good articles that escaped my notice during the busy season, that improve my knowledge of beedom wonderfully. If a bee-keeper doesn't take a bee-paper of some kind he is not a bee-keeper that is up with the times. Constantly there are new devices coming up, or improvements made in the ones already in use, that the bee-keeper must adopt sooner or later in making apiculture a success. Cass Co., Nebr.

Strength of Colonies in Spring—Wintering.

BY C. E. MEAD.

I have received the following question for reply, from Editor York:

"MR. EDITOR:—On page 707, an estimate is made that in a box or tight-frame hive, if I understand correctly, a colony will be five times as strong April 10 as March 21, and 25 times as strong May 11. Now on March 21 a good colony will have enough bees to cover from 2 to 5 Langstroth frames. Does Mr. Mead mean that a colony having enough bees to cover 2 frames March 21 will have May 11 enough bees to cover 50 frames, and one that has March 21 enough bees to cover 5 frames will have enough bees May 11 to cover 125 frames?—INQUIRER."

ANSWER.—It seems I did not make my explanation as clear as it ought to be.

March 1 you have many old and a few young bees. March 21 the old bees are dying fast, and the young bees are hatching equally fast, if in a closed-end frame hive, or well packt loose frame, log or box hive. Introduce an Italian queen to a colony of black bees in October, and it is a rare thing to find a teacupful of black bees the first of next May. Reverse the process and you probably will find a few more Italian workers on May 1.

Now in a poorly-protected hive the ratio of increase will not be so large. Sometimes the increase is so slow that the old bees die so fast that the brood is left bare and the colony plays out. So the ratio of increase varies in proportion to the warmth of the space occupied by the bees. The colony is at a standstill in early spring in proportion to the death of the old bees. In a box or log, or closed-end frame hive, or well-packt hive, there will be a ratio of increase of 5 in every 21 days after the old bees are nearly gone, till the capacity of the queen is reacht, which, in this locality, is June 1, on an average, or from 10 to 12 Langstroth frames of brood. If the queen could keep up the same ratio of 5 the summer through, but one queen would be needed.

Now, to show what I mean, I will explain again how I winter 4-Langstroth frame nuclei and small colonies:

I place a big hive on a large stand with the entrance in the bottom, with a slanting alighting-board. Around this hive the size of the stand I place a rim of ⅞ boards, one foot high. I then pack the big hive as warm as I can. I put four one-inch blocks of wood on the rim ⅞ inch from the top. On these blocks rest the long bottom-board of the nucleus. Make a bridge from the hive to the rim; have a 2-inch by ⅜-inch notch cut in the bottom of the next one-foot rim. The entrance should not be on the same side as the lower hive. Screw an alighting-board just under the 2-inch entrance. Set the second rim on top of the first rim, with clay in the joint. Put on the third rim and pack all around, and a foot above the nucleus. Put on a water-tight cover, that allows a free current of air to pass under it to carry off any moisture. I leave a full entrance to the lower hive till pollen comes in freely, then I contract it so as to make them uncomfortably warm so they have to fan all the time.

Now as to results: The nucleus is as warm, or warmer than the big hive colony below it, and will need more room early in the season. They usually equal, and often surpass in strength, the big 10-Langstroth-frame colonies below by June 1, which shows how bees can increase when in hives where the heat is economized. I have done this for the past 10 years or more.

Cook Co., Ill.

No. 2—Recollections of an Old Bee-Keeper.

BY DR. E. GALLUP.

(Continued from page 4.)

Studying about the wintering of the before-mentioned colony, the following winter I raised up all my box-hives from the bottom and placed an inch block under each corner, and then I had solved the wintering problem, providing they had a sufficient amount of surplus.

Canada was a great honey country in those days. The country was new, with large bodies of basswood, elm, willow, maple, wild flowers, hundreds of acres of red raspberries, acres of buckwheat, white clover, etc., and abundance of snow to protect the ground, so it did not freeze. The summers were warm, moist and sultry—just the right conditions for the secretion of large quantities of nectar.

Well do I remember the first time I saw an old "king-bee." The bees had swarmed and partially clustered, and before I could hive them they commenced going back to the old hive, and in watching them go back, I saw the old "king-bee" crawling on the ground. I got her out on a piece of shingle and helpt her into the hive. People used to tell me that there always was an "old king-bee" that controlled everything about the hive, but never having seen one I was a Doubting Thomas up to that time.

Now I must tell you something about buckwheat. You know that millers always have fat hogs, altho you may not know whose grain they are fattened on. Well, I had about an acre fenced in for the hogs, and they rooted it over and over, and of course manured it thoroughly in the course of four years. When sowing my patch of buckwheat for the bees, as I usually did, I thought that hog-yard is so rich and mellow, why not shut the hogs in the pen and harrow in some buckwheat? Well, the result was that patch turned out the most nectar to the rod that I ever saw. One could smell the perfume for rods, and it was litterally alive with bees, while my other patch, that was seeded at the same time, and not manured, was visited by scarcely a bee. The lesson is that manure, or a rich soil, produces more nectar than a poor soil. I have noticed the same fact many times since. Here in California a heavily fertilized orange-grove shows it in a remarkable degree. In Iowa I had about six acres that I cleared up and yarded sheep on for two seasons at night, and seeded it to white clover, and the way the bees workt on that was a caution; while outside they scarcely visited white clover. Keep your eyes open and you can always learn.

About the year 1843 I hired a young man from Vermont to help in the sawmill, and he informed me of a man by the name of Weeks who had publisht a book on bees and got up a patent hive, so I obtained the book and right to use his hive. That was the first writing of any description I ever saw on bees. The hive was simply a box with a chamber for two drawers or boxes for honey, and the hive was suspended in a frame by two cleats, one on each side, with a slanting bottom, and the bottom-board fastened to the hive with hooks and staples at the corners. A button was at the back of the hive, so that when the bottom was buttoned forward the hive was closed except the entrance; when it was unbuttoned it left an inch space all around the bottom of the hive to allow for winter ventilation, or hot weather ventilation, also; and being so slanting, when a moth-worm fell onto it, he would roll out and break his neck in falling to the ground! Bees would winter in that hive with the inch ventilation all around the bottom, providing they had sufficient stores. I had demonstrated that fact by raising my box-hives on inch blocks at the bottom. I took a lesson from that in cellar wintering.

I received a good many good points from Mr. Weeks' little book, as well as erroneous points. Here is another fact that I discovered: Honey gathered in the forepart of the season, thoroughly matured and ripened, is the very best kind of stores for wintering; while honey gathered late in the season, or at a time when the weather is wet or cool, is not sufficiently ripened or matured, and is not good for wintering. Bees will consume more pounds, get the dysentery and die, or what some call bad spring dwindling, etc. An early swarm and a late one, weighed in the fall at the same time, the early swarm weighing considerable less, would winter well, while the late swarm weighing more would frequently starve before spring.

Have not many of you made a great mistake since the extractor has come into use, by not regarding the above fact? You have trusted to your late-stored honey for wintering purposes, and met with loss, and then, like the old lady who took her death o' cold by eating gruel out of a damp basin, you are ready to attribute your mishap to anything but the right cause. In order to cure remove the cause.

Orange Co., Calif.

[To be continued.]

Honey as Food is the name of a 24-page pamphlet, 3¼x6¼ inches, which we are now printing for general distribution among those who should be users of honey. It is just the thing for bee-keepers to hand to every one of their customers, and also to those whom they would like to have as customers. It is very handy in size—just right to go into an ordinary business envelope. It contains 12 illustrations, five of which are somewhat comic, and help to make it attractive. There is a blank space for your name and address. About ⅜ of the pamphlet was written by Dr. Miller, and then we added thereto many new and valuable honey recipes—for cooking and for medicinal purposes. In all, it makes a neat little pamphlet. Send name and address and we will mail you a sample of "Honey as Food."

Prices for quantities, postpaid—25 for 30 cents; 50 for 50 cents; 100 for 85 cents: 200 for $1.40. By express, not prepaid, 500 for $3.00; 1,000, $5.00.

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

CONVENTION PROCEEDINGS

Report of the Northwestern Bee-Keepers' Convention, Held in Chicago, Nov. 10 and 11, 1897.

REPORTED BY A SPECIAL BEE JOURNAL REPORTER.

(Continued from page 7.)

WINTERING BEES OUTSIDE.

"What is the best way of wintering bees outside?"

Mr. Moore—Putting sheet iron covers over them.

Mr. Green—That is one of the ways; I use such covers, and find they are very practical.

Pres. Miller—Who has been very sucessful in outside wintering of bees? Let me ask this question: How many of you prefer for yourselves outside wintering of bees to cellar wintering?

Eight preferred outside wintering.

Pres. Miller—It might be interesting if we knew something of the location of those different ones. Mr. Green, for instance, is somewhat down in the State of Illinois. It might be expected that those farther south would be more in favor of outside wintering than those farther north, but it is not always the case; perhaps it would be interesting if we could know something of the amount wintered, and about the distance north or south.

Mr. Karch—I have been keeping bees from my boyhood. I have not a convenient cellar as some of my neighbors, who keep their bees in the cellar very successfully. My cellar is not large enough. I have to winter them outside, and that is why I askt this question.

Mr. Rohrs—I have been in the bee-business about five years. I have tried wintering bees in the cellar, but with poor success. Now I don't know whether it is on account of my cellar or because I don't know better, so I have tried to winter them under a bee-shed like they do in Germany, and I succeeded a good deal better in the cellar. Certainly I have lost, but I always think I am one of those who has to learn more to have better success than I do, and I have been of the opinion that it is well to have a hive that protects the bees all the year round. In the old country they leave them as they are, and they always winter perfectly well. I have been thinking of having a hive that would be good for winter and for spring, and I believe that we want protection for bees in spring. I think a bee-shed is a good thing, except there is one objection. After you have hives close together, you are bound to lose queens now and then; and I have been looking for another and better hive, so that the changes of winter will not affect the hives so easily. I would prefer to have the bees outside. I am from the southern part of Wisconsin. I have my bees on the sunny side of the house, towards the southeast. I hope I will have good success with the hives I have at present, because I know I have good protection. I have the Champion hive. I want a hive that in the spring I can take off the back and handle it easily. I want my bees packt again after that, because we have very changeable weather. In the spring we get a warm spell, then a cold spell. I want a hive that will give protection to the bees. This hive I can take apart and clean it easily. Then I want my bees packt again until the honey-flow comes. I have seen other parties in my neighborhood use chaff hives successfully, and I don't see why I cannot. I can ventilate this hive.

Mr. Miller—I am from eastern Pennsylvania. While I never kept bees on my own account, my father is a beekeeper and my life has been spent among them. At home we have tried wintering in the cellar with fair success; in a shed, with a loss of 30 per cent., and have tried them without any protection, far better than in the cellar or shed. The chaff hive was the best thing that we had. My father finally got some thin slabs and sawed these up and made a rough hive, set it over the other hive, and filled that up with chaff, and in the spring he took the chaff out and left the hive there, which gave protection against winter storm, and afterwards took it away—all but the front part of the hive—and then finally took that away altogether; in that way the loss during the winter was reduced to almost nothing, while before he lost in sheds fully 30 per cent. during the winter; probably ten per cent. in cellar.

Mr. Green—That is practically the way I have followed for years, altho I prefer to have four hives together in one large case, two entrances facing east and two west, two or three inches apart and four inches between the hives and outside walls, often covered with one roof; a very simple, easy plan of protection, and it works very well indeed.

Mr. Whitcomb—If the cellar is extraordinarily dry and extraordinarily well ventilated, they winter nicely in the cellar, but we in Nebraska have best success in wintering in a 4-inch packing case, well bookt together with hooks in the corners, and if necessary to examine the hive you can remove one portion and let the other remain. We have tried corn chaff, but it is villainous stuff to get dry. Dry leaves are better than anything else. We have reduced the loss in winter to almost a minimum. The packing case is lower in the back and high in front, with one cover that covers the whole thing, painted red, made of the lightest lumber possible. Hundreds of them can be piled, one on top the other when not in use; the little board that covers the entrance is separate—everything is separate, with two hooks on each corner. We have been using them for 15 years, and I don't see but they are as good as they ever were. They are always ready; each one is made exactly alike, and they cost about 90 cents a piece. They are cheaper than the chaff hive, and are not cumbersome at all, and usually around the yard you can rake up leaves enough, but avoid as much as possible keeping bees under sheds or in a place where the packing will get wet. I would rather a little colony of bees would stand out without any protection than to be packt in wet packing, because then you will find your colony in bad condition in the spring. We avoid sheds of all kinds and descriptions. In the summer time, in Nebraska, the evenings are very cool; I find under the trees and buildings the mercury runs down three or four degrees more than it does in the open air. With us the sun comes out very early in the morning, and it is only the bees that get out in the morning that are able to lay up stores. In keeping a record of the colonies, I found the ones that are the farthest away from sheds and buildings always put up the most honey. I had a hive on the north side of a little plum tree—it was quite a small tree when I put it there, but as it grew, I noticed the stores in the hive were less and less every year, so I moved it away from there a few feet, and found the stores from year to year increast. I don't use any shed at all, except an artificial shed that shades the top and side of the hive, and gives free circulation of air. My hives always face the east for two reasons, first, the front and rear of the hive is not shaded. I want the sun to shine upon them as much as possible, and as long in the evening as possible. If you ever went to a beehive late at night, you heard the evaporation going on.

Pres. Miller—I see planer shavings are highly recommended for packing; have you tried them?

Mr. Green—I have used planer shavings extensively, and they are most satisfactory. I should be very careful not to use straw or corn of any kind, because it attracts mice. Chaff, of course, is one of the worst things in that respect.

Pres. Miller—I never heard of corn chaff before.

Mr. Whitcomb—In all the elevators of the great grain belt they have a great deal of corn chaff; corn chaff comes from corn that is shelled; you can go there and get a hundred wagon loads of it if you want; a few drops of water will spoil it; it must be kept dry.

Pres. Miller—What further upon the best method of wintering bees out-doors?

Mr. Baxter—I am in the bee-business for the money I can make out of it. I have been in it for about 20 years, and I have experimented a great deal, and never kept less than 250 colonies. After all my experiments I find that the Dadants plan beats anything else I ever tried. I have tried other plans, and find the Dadant gives the best results. I put a mat made of grass on top of the frames, then fill the cap with dry leaves, and invert it right on the hive. In the spring, if I think the bees are short of stores along the latter part of March or beginning of April, I can lift up the cap, with the leaves and everything, and just remove the mat and see how they look. If they need any feed I can feed them without unpacking them. I believe in unpacking them very late, as late as possible. I have unpackt them as late as apple blossoms, and have lost but very few colonies during the winter. There is a big difference in wintering, whether you are running them for comb honey or extracted honey.

Adjourned until 1:30 p. m.

(To be continued.)

☞ See "Bee-Keeper's Guide" offer on page 14.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Using Unfinisht Sections.

I have a lot of unfinisht section that I want to use in the spring, in the white clover harvest. I let the bees take the honey out of them. Will it be necessary to use queen-excluder honey-boards to keep the queen from depositing eggs in them? and which is best, wood or tin? MISSOURI.

ANSWER.—If I understand you correctly, you expect the bees to empty the sections next spring so as to get them filled up afterward from the white clover harvest. I don't believe you better try it. Almost surely the honey in the sections will be more or less candied, and in that condition the bees will not make a perfect job of cleaning them out. If they leave the least bit of granulated honey in the cells, that will affect the character of the fresh honey. The only way to use safely unfinisht sections, is to have them cleaned out thoroughly by the bees as soon as they are taken off, and before any granulation has taken place. Of course this can only be done in the fall, and not too late, at that.

Usually it is not necessary to use a queen-excluder to prevent the queen from going into the sections. A zinc excluder is the kind generally in use. Wood can hardly be made exact enough.

Making Grafting-Wax—Water-Wheels.

1. How is grafting-wax made?

2. Please give the proportions to build an over-shot water-wheel, three horse-power? I have 1000 inches of water and 20 or more feet fall. I want to put in a saw, etc., to get out my bee-supplies, etc. CALIFORNIA.

ANSWERS.—1. Make grafting-wax of equal parts of beeswax, tallow and rosin. Possibly in California these proportions ought to be changed on account of the hot sun, but any local nurseryman ought to be able to tell you about it.

2. If you want to know the kind of woman to select for a bee-keeper's wife, I have some good advice on tap, but the matter of over-shot water-wheels is beyond me. Perhaps you will most readily get the information from some one near you who has had some experience in such things.

Honey vs. Sugar for Stimulative Feeding.

Dr. Tinker asserts, in his "Bee-Keeping for Profit," that honey is preferable to sugar syrup for stimulative feeding. Have you perhaps observed in this direction? If so, with what result? Does your experience bear out that of Dr. Tinker?

Anyhow, if syrup is of necessity used, what should be the proportion of water to sugar? Would one of sugar to two of water—by weight—make ths feed too thin? And what quantity, and at what intervals, would you advise feeding average colonies?

I fed three or four bags of white sugar last year, with no apparent benefit. It was cheap; and I should not wonder if it were made of glucose. The bees used it up all right, but it certainly had no stimulative effect. Or is sugar of any kind ineffective for the desired purpose? SOUTH AFRICA.

ANSWER.—I can only work around the edges of your question, having never made any direct experiments. Tradition or something else gives the general reply that honey is better to stimulate the queen to lay than sugar. Perhaps a good reason for that lies in the small amount of floating pollen found in honey. Pure sugar is little more than fuel, keeping up the heat and tending to fat and laziness. In my early days of bee-keeping, I had a colony one spring which had neither eggs nor brood at a time when brood was present in other colonies. I don't now remember whether I lookt for a queen without finding one, or whether I took it for granted that no queen was present because there were no eggs. At any rate I decided it was queenless, and took steps to unite it with another colony. (My present recollection is that both colonies were so weak that it would have been a good thing in any case to unite them, but at that time I had not yet reacht the point where I cared more for numbers of bees than numbers of colonies, and every hive with bees is counted.) I simply put the combs with adhering bees in the hive with the other colony, each colony on its own side of the hive. After perhaps a day or so, the thought came to me that it was possible that no eggs were laid because the bees had no pollen. I hurried to the hive, and was glad to find that as yet the bees had not mixt (the weather was pretty cool) so I lost no time in getting the bees back in their old place. Not a particle of pollen could I find in the cells, so I gave them from another hive a comb containing pollen, and on my next visit I found eggs. All my observations and reading from that time confirm the opinion that bees will rear no brood without pollen. Now if there is not enough pollen floating in honey to start the queen laying in the spring, the case would be still worse with pure sugar with no sign of pollen, so it seems pretty clear that honey is at least a little better than sugar for stimulating.

But here comes in something else. Suppose there is plenty of pollen in the combs. Now feed pure sugar. That will excite the bees, using up their strength and calling for the consumption of pollen to repair the waste of tissue. The question arises whether that may not make them consume all the pollen needed.

As to the interval of feeding, perhaps they should be fed every day, and every day would be at least as well. Perhaps half a pound at a time as a minimum, and no harm could result from any larger amount unless it should result in clogging the combs.

No, I don't believe one pound of sugar to two of water would be too thin, and yet it might not be any better than equal parts.

Some of the German authorities speak in the highest terms of what they call "speculative feeding," that is, feeding in the spring to fill up the combs more or less. Geo. de Layens, one of the highest French authorities, who lately died much lamented, says that no amount or kind of feeding makes much difference about a queen laying outside the proper season for her to do so.

In England I think pea-flour is mixt with candy for feeding to stimulate laying.

Personally, I doubt whether I shall ever again do much to hurry up laying by feeding of any kind, other than to see that a bountiful supply of stores is always present in the hive, and every year I attach more and more importance to this.

How to Distinguish Glucosed Honey.

How can I tell glucose or adulterated honey from the pure? I have tried several tests, but they do not seem to have the desired effects. NEW YORK.

ANSWER.—As yet there is probably no way readily to detect adulteration of honey with glucose by means of ordinary appliances at hand, but if there's much glucose present you can tell pretty well by the taste. It might not be the safest thing however, for a novice to attempt to decide by the taste, for some kinds of honey might taste badly to him, altho perfectly pure.

Some Interesting Questions and Replies.

1. My bees are in 8-frame dovetailed hives. Would my honey crop for next summer be increast or diminisht if they were changed to 10-frame hives, with two frames filled with foundation placed in or near the centre by spreading the brood say about May 15, the main honey-flow in July? or would it be better to put two 8-frame hives together and alternate the frames of brood with full sheets of foundation, and when the flow comes remove the top hive and put on the sections?

2. What is the inside width of the 10-frame dovetailed hive?

3. If you were to start anew in the bee-business, would you use the tall section instead of the 4¼x4¼?

4. Are cleated separators preferable with the narrow section, to ordinary ones with the slotted sections?

5. Is a frame 11 inches deep as well adapted to comb-honey production as the standard 9⅛ inch frame?

According to scripture, I haven't askt "a few" yet, but will quit and give some one else a chance. MICHIGAN.

ANSWERS.—1. You've struck one of the hardest questions with which bee-keepers have to grapple, that is, What is best to do with regard to swarming so as to get a big crop? I must confess I don't know, but I'll answer as far as I can your question, and possibly give you just the least speck of help. If about May 15 you change to 10-frame hives and give two frames of foundation, your crop will be increast, *providing* those two extra frames induce the bees not to swarm. I very much doubt whether it would have that effect. I doubt whether it would be any different from what it would be if they started out in the first place with 10-frame hives. For I suspect that up to May 15 the bees would have all the room they needed in an 8-frame hive, and just as much as they would use in a 10-frame hive. But if you can get the bees to tell you just when they are going to make preparation for swarming, and give them two or more frames of foundation just before that preparation, you may do something to keep them from swarming. Yes, it may safely be said you will do something in that direction. If you take away enough frames of brood, replacing them with empty frames, they will be pretty certain not to swarm. Possibly, however, to prevent entirely all notion of swarming, it might be necessary in some cases to take all the brood away. And then it would be a problem whether that would practically be any different from letting the bees swarm. At any rate, if you attempt the plan at all, let the change be made just as late as you possibly can without having the bees actually start queen-cells.

Giving two 8-frame stories will be all right, and in some cases alternating the brood with foundation will be all right, but in most cases it will be all wrong. It will be all right if the colony is very strong and the weather keeps warm enough so no brood is chilled. The safe plan will be to do very little spreading of brood at the time of giving the second story. Don't give it till it is needed, or rather don't put brood in it till room is needed. Give the second story below, and don't do any spreading, but when the upper story is full, if the bees don't seem inclined to occupy the lower story, take one frame out of the upper story and put it below, taking this frame not out of the center of the brood-nest, but take one of the side frames, so there shall be no spreading in the upper story. For putting that one frame below will be spreading the brood emphatically.

2. I don't know, but I suppose you can get at it easily. The width of the 8-frame is 12⅛ inches. If frames are spaced 1⅜ inches, that makes 2¾ inches for two frames, which added to 12⅛ makes 14⅞ as the right width for ten frames.

3. I think I'd give both a trial, before deciding. My experience with the tall sections is so limited that I have as yet no intelligent opinion.

3. I don't know. I've never tried the cleated separators, or fence, but hope to give them a trial next season.

5. I don't know. The fact that 9⅛ is so commonly used rather implies that such is the best depth, and perhaps it is, and yet some prefer the greater depth, among them some of our best men, so it leaves the question still an open one.

Send on your questions. As long as the answers hold out you're entitled to your share.

Rendering Beeswax.

How can I get the beeswax from the honey-comb? This is my first year with bees, therefore I do not know much about them. BEGINNER.

ANSWER.—There are different ways of getting beeswax out of old combs, but there are some preliminary steps to be taken that should be the same in either case. The cells of old combs contain cocoons left by successive generations of young bees reared in them, and these cocoons act as a sort of sponge in soaking up the wax when it is melted. To prevent this you should get the cocoons soakt as full of water as they will hold, so that they will have no room for any wax. This can be best accomplisht by breaking the combs up fine. You can't do this when the combs are warm, but the combs must be cold and brittle. Good weather for that now, so break them up fine, and then put them in water and let them soak perhaps two or three days. If you have them in too cold a place the water will not soak into the cocoons so rapidly, but you mustn't have the water much above blood heat or the wax will melt and defeat your object. After being well soakt you can get out the wax in different ways, one of the easiest being by means of a cook-stove and an old dripping-pan. Tear open one corner of the dripping-pan, put it in the oven of the cook-stove with the door of the oven left open, the split corner of the pan projecting out and something under the corner of the pan on the floor ready to catch the wax as it runs out. Put something in the oven under the inside end of the pan so as to raise it half an inch to an inch, thus allowing the wax to run down hill when it melts. Now put your soakt combs in the dripping-pan, and the heat of the stove will do the rest. It may be a good plan to put a little water in the pan that sits on the floor, so the wax will more easily come out of the dish. If you melt it over again to form it into a better-shaped cake, be sure not to heat it too much.

Knowing a Laying Worker by Her Looks.

Please tell me how you can tell a laying worker by her looks. On page 806, (1897) W. W McNeal says a laying worker can be seen and told by her looks, and that anyone who will take the trouble to open his eyes and look cannot fail to pick them out, but I cannot find that he tells anywhere how they look. S. G.

ANSWER.—I hardly think Mr. McNeal meant you could tell a laying worker by her looks, but that you could tell her by her actions and by the actions of the bees toward her. To be sure he says she has a "soakt" appearance, but he says in the same connection that other bees look the same way. Mr. McNeal is evidently an interested observer, and I hope he will follow up the matter still more closely. I have seen a laying worker in the act of laying, and she had no soakt appearance. Of course I do not say others might not have such appearance, but the question might be raised whether there may be no possible mistake in Mr. McNeal's observations. It is now ascertained that instead of a single laying worker, a good percentage of the workers in the hive are of that sort. I have seen bees surrounding one of those soakt-looking workers, and was at first of the opinion that they might be laying workers, but soon found my mistake. I wish Mr. McNeal would watch closely the next time he has a chance, and see whether it is not the soakt-looking worker that is giving up honey to the bees encircling it.

White vs. Yellow Sweet Clover.

What variety of sweet clover is the best adapted for low land, rather wet for cultivation, and that cannot be underdrained? I want to sow red-top, Alsike and sweet clover. Please don't say you "don't know." INDIANA.

ANSWER.—Now look here, what kind of fairness is there in asking a question and then shutting a body off from the best answer he can make? The two kinds of sweet clover are the white and yellow, and it seems rather a hard thing to get many to tell much about the yellow. It is said to be earlier, perhaps two weeks earlier, than the white. In places where white clover is plenty, that would probably be a disadvantage, for in a white clover country sweet clover is of no great value till the close of the white clover harvest, and white sweet clover comes plenty early for that. It is reported to be a better yielder than the white sweet clover, but that report comes only from one or two, and sometimes a plant does not act the same in all locations. The yellow seems to be a lower-growing kind than the white.

It would be a matter of benefit if some one who has tried the two kinds side by side, say in New York State, where both grow more or less plentifully, or indeed in any other State, would make a full report as to the comparative merit of the two, and in this there seems to be a chance for you to do the brotherhood a real service by trying the two side by side. But until you have fuller light on the subject you may do well to use mostly the white, for it is probably a settled thing that in your state (Indiana) white sweet clover will succeed well and give good results. Whether the yellow will grow as well, or whether there is any difference whatever as to the growth on the same or different soils, is a thing yet to be learned.

A New Binder for holding a year's numbers of the American Bee Journal, we propose to mail, postpaid, to every subscriber who sends us 20 cents. It is called "The Wood Binder," is patented, and is an entirely new and very simple arrangement. Full printed directions accompany each Binder. Every reader should get it, and preserve the copies of the Bee Journal as fast as they are received. They are invaluable for reference, and at the low price of the Binder you can afford to get it yearly.

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 20 cents; 100 for 35 cents; or 200 for 60 cents.

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United States Bee-Keepers' Union.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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Vol. XXXVIII. CHICAGO, ILL:, JAN. 13, 1898. No. 2.

EDITORIAL COMMENTS

Our Heartfelt Thanks are Due, and are hereby tendered, the many of our readers, who, when renewing their subscriptions for 1898, wrote us such kind words of appreciation of the Bee Journal and its work. Yes, and we want also to thank *all* who so promptly renewed their subscriptions, for by so doing they showed their cordial feeling toward us and for our efforts. Such things are exceedingly encouraging to an overworkt editor, and spurs him on to do even more and better work, in the interests of his readers, if that be possible.

We have been greatly rejoiced, too, that so many of our present readers are doing what they can to help increase our list of subscribers. Those who read the Bee Journal regularly are the ones best able to speak of its merits and value, and we trust that every one of our readers will continue in the good work until all who are trying to keep bees may be found among its readers, and thus by reading it weekly learn how best to make a success of their bee-keeping. Surely, an educated bee-keeper is better as a neighbor than one who lacks the information that may be had by reading.

◆

The Honey Market in Chicago.—During the past two or three years it has been our privilege, as well as duty, to help drive out several gangs of honey commission sharks, who were simply robbing honey-producers by getting in the goods and selling at any price, then remitting what was left after deducting their commission, cartage, etc., or, as in some cases. not remitting anything at all to the shipper.

Having pretty well cleaned this market of such rogues, the past few months the legitimate commission men, as well as some others who are trying to sell pure honey to the retail grocery trade, have had another kind of competition to meet that is very discouraging, to say the least. It is none other than some bee-keepers themselves, who live within driving distance of Chicago. It seems they have loaded up, and gone with their honey from grocery to grocery, offering it away below the market price—even below a fair living price. It is not only small bee-keepers that have done this, but some large bee-keepers as well.

Now, the question is, What are commission men to do under such circumstances? How can they be expected to hold up prices of comb honey, when a bee-keeper with 10 to 15 tons drives around among the retail grocers, and sells the best white clover comb honey at from 9 to 11 cents per pound? And what are city bottlers of pure honey to do when the same producers offer to hundreds of grocers their extracted honey put up in glass jars practically at cost?

Of course, such things cannot last longer than until the producers' crops are sold, but that is just long enough to fix the price, and when that price has been fixt at a low point, it is not an easy matter to soon raise it again. If it were in a small town, where perhaps not more than half a ton of honey is used in a year, it wouldn't be so bad. But here in Chicago, where over a half hundred carloads are shipt annually, it can readily be seen that a few foolish bee-keepers are not only getting less for their own honey than they might, but they are causing a loss to the thousands of shippers who send in their honey from a distance, and must pay the expense of freight, cartage, commission, etc.

We feel very much like publishing the names of a few of the producers who have come into Chicago the past two or three months, and who have gone up and down the streets, among the retail grocery trade, and have sold their honey away under the prices askt by the reliable honey commission men. But we forbear doing so this time, tho if the thing is repeated another year we may have to name them in cold print. It would seem that a bee-keeper who is bright enough to produce a good crop of honey would also be bright enough to see what a great mistake he is making by doing as we have described, and also the manifest injustice to his fellow bee-keepers.

◆

The 13th Annual Report of the National Bee-Keepers' Union is on our desk. We expect soon to publish the major portion of it in these columns. General Manager Newman says in his opening paragraph "that notwithstanding the more than usual number of appeals to the Union for protection and defense, it has been successful in every completed case, with good prospects for victory in every one." That is good.

During the past year 20 new names have been added to its membership list, making $20 additional for the treasury. The balance in the treasury shown in the preceding report was $541.20; in the present one there is a balance of $327.65, the expenditures during the year being $233.56. It would seem that with the balance on hand, and at the rate it is being used, it was hardly necessary to call for any dues from the members for 1898, but the call is made for another dollar from each, as per the decision of the General Manager and the Advisory Board.

◆

Shamrock.—Statement having been made in British Bee Journal that the shamrock was not a honey-plant, quite a discussion arose as to what the shamrock is. It seems hard to come to any agreement, the name being applied by different persons to different plants. The editor starts out by saying that shamrock is "the tiny-leaved wood-sorrel (Oxalis Acetosella), bunches of which are worn in the button-hole of patriotic Irishmen on every St. Patrick's day." Then "An Irish Reader" says shamrock bears a yellow, not a white, flower, and is *trifolium minum T. major*, preferably the former. Then others mix in the discussion, and besides the plant named, the term shamrock is applied to white clover, white honeysuckle, black medick, *Trifolium procumbens* and *T. filiforme*. The editor finally agrees that every one may select his own shamrock, giving first choice to the Irish.

◆

The New Union Vote for General Manager and Treasurer, with six as a Board of Directors, which was taken in December, resulted as follows, 141 ballots being cast:

FOR GENERAL MANAGER AND TTEASURER—Hon. Eugene Secor, 127 votes.

FOR BOARD OF DIRECTORS—Dr. C. C. Miller, 126 votes; C. P. Dadant, 120; Hon. E. Whitcomb, 119; W. Z. Hutchinson. 119; Ernest R. Root, 116; and Rev. E. T. Abbott, 86.

It will be noted that all are re-elections. Mr. P. H. Elwood received 50 votes for the position of Director, he being named by Mr. W. F. Marks, in Gleanings for Dec. 15, the latter gentleman thinking that New York State should be represented in the Board of Directors. We also would have been glad to have urged Mr. Elwood's election through the Bee Journal had the suggestion been made in time. He is an able man as well as a large and practical bee-keeper, and would make a capital member of the Board. Why not let his name stand as a candidate next time?

◆

Sweet Clover.—In the California Cultivator Prof. A. J. Cook is askt several questions about this plant, among them as to whether farmers can afford to let it spread. A part of his reply reads thus:

> "I have grown sweet clover for years for bee-feed in Michigan. It is very excellent as a honey-plant. The quality and amount of honey from it is rarely surpast. I never could get my horses or cows to eat it. I think it is worthless except for bees. I never found it difficult to get rid of it."

Just how Prof. Cook could say of sweet clover that he "thinks it is worthless except for bees," after all we have publisht in the Bee Journal in its favor as a forage and hay plant, is more than we can understand. It would seem that we have given sufficient from those who have had large experience with it, to establish beyond successful contradiction the value of sweet clover to the farmer aside from its use as a honey-plant. Can it be that Prof. Cook has failed to read what has been publisht along this line?

Holding the position he does in the estimation of California farmers and others, we don't think Prof. Cook can afford to let it go out that he even "*thinks*" that sweet clover "is worthless except for bees." We hope he will follow closely the discussion on sweet clover in the report of the Northwestern convention now being publisht in these columns. Mr. M. M. Baldridge could also give a good many valuable pointers on this subject.

THE WEEKLY BUDGET

THE BEE-KEEPERS' REVIEW for December came printed on better paper, with a new, neat faced type, and other indications of prosperity. Editor Hutchinson is doing his share toward keeping his paper abreast of the procession.

MR. E. L. CARRINGTON, a queen-breeder in Walton Co., Fla., wrote us Jan. 2, that his wife, Mary Carrington, had past away Dec. 27, 1897, after a lingering illness of four years. We know from personal letters received from Mr. Carrington the past few years that he has had quite a struggle, and that his wife was a great sufferer. We extend to our bereaved fellow-worker our deepest sympathy in his great loss—a dear wife—Heaven's best gift to man.

MR. G. M. DOOLITTLE, of Onondaga Co., N. Y., writing us Jan. 4, had this to say:

> "Our winter has been quite severe of late; but prior to Christmas it was open and fine weather the most of the time. We have about eight inches of snow, if it could have staid as it fell, but it is piled up in the roads and behind fences on account of the many high winds we have had. The mercury toucht 7° below zero last night, but it is warming up now under a strong south wind which is keeping the air full of whirling snow."

MR. DAVID N. RITCHEY, of Franklin Co., Ohio, writing us Jan. 5, said:

> "I have been confined to my bed for eight weeks, with erysipelas, but am getting better slowly. I have not been able to perform any work since I came back from Buffalo."

Eight weeks is a long time to be laid up, and especially for so naturally active a man as Mr. Ritchey. We shall not soon forget the lively part he took at the Buffalo convention, especially in the singing. It did us good to see how he really enjoyed the musical part of the meeting. We trust Mr. R. may soon be fully recovered, for he's too valuable a man to be laid on his back.

HON. J. M. HAMBAUGH, our Illinois friend who removed to Southern California about two years ago, has met with sore affliction in the loss of his little boy, who died the day before Christmas. Mr. G. F. Merriam, a neighbor bee-keeper, wrote us as follows about it, on Christmas Day:

> "This is a very sad Christmas for our friend, J. M. Hambaugh and family, for their youngest child, a very bright and promising boy of 4 years, lies dead at their home down the valley. He died yesterday forenoon, of pneumonia, being sick only 3 or 4 days. We go to-morrow to the funeral, and all his neighbors will go to testify their warmest sympathy for the family in their affliction."

Surely, Mr. Hambaugh has the heartfelt sympathy of his thousands of friends in this great bereavement that has come to him. Many of us know just how sad his heart is, for have we not past through a similar sorrow? But the thought that some sweet day there'll be a reunion of separated hearts, brings cheer and comfort to the sorrowing.

EDITOR E. R. ROOT, of Gleanings, some thought at the Buffalo convention resembled another member of that meeting, Mr. D. W. Heise, of Canada, or *vice versa*. After referring to this, and the comment we made thereon in these columns some time ago, Editor Root says this in Gleanings for Dec. 15:

> "By the way, this is not the only instance of mistaken identity at the Buffalo convention. Two men, of about the same size and height, who attended, lookt decidedly alike; when the two sat near each other it was almost impossible to tell which from t'other. One was a quiet, genial, pleasant man; the other was always bobbing to his feet, and making himself notoriously disagreeable—always throwing out objections, and never harmonizing with the discussion. I said to the first-mentioned person, after I had learned to distinguish one from the other, 'Why, you look almost exactly like——.'
>
> "'I am not flattered,' said he. 'I have no sympathy with his ways of doing. Such men are always a bore to a convention, and a drag to good discussion.'"

Yes, and we were also remarking about the resemblance to that "quiet, genial, pleasant man," when he said he felt like going home long before the convention closed, as soon as he learned that he was being mistaken for the one "making himself notoriously disagreeable." And we didn't blame the first gentleman for wanting to get as far away as he could from his disagreeable "double." Perhaps it was kind for the convention to endure as much as it did from the disturber, but it certainly was not *just* to those who had come a long way to listen to helpful discussions. We hope that hereafter there may be no more disturbing elements present.

BEEDOM BOILED DOWN.

Coffee-Grounds for Smoke are recommended by a German bee-keeper as better than tobacco, because producing more smoke and not stupefying the bees.

Receptacles for Wax, according to a writer in the British Bee Journal, should be of earthenware, as iron, tin and copper have a bad effect on the color of the wax.

Bee-Keeping on Shares.—A. Weathelet, of Rucher Belge, has three out-apiaries in care of bee-keepers who receive one-fifth of the harvest. That would be considered rather a small share in this country.

Box-Hives for Wintering.—Le Rucher Belge says a movable-frame needs 33 to 40 pounds of stores for winter, and a fixt hive 22 to 26 pounds. If that is true it must be that box-hives are about 50 per cent. better than frame hives for wintering in Belgium.

Bees for Cheaper Work.—On the Island of Ceylon, formerly the flowers of vanilla were artificially fertilized by the hand of man. After bees were introduced this was no longer necessary, and the price of the product fell to a lower point.—Mrs. Wilma Bumler, in Bienen-Vater.

Save the Fragments.—Bienen-Vater advises that before throwing away the accumulation of dead bees and gnawings found on the floor of the hive in winter and early spring, the whole should be past through a coarse sieve to save the little particles of wax. German thrift sometimes goes a good ways, but it might be a good thing to have enough of it to temper our American wastefulness.

Introducing a Queen, by Doolittle's plan, putting her in a cage made of foundation, M. von Rauschenfels says is an entire success with him, and he does not even care to open the hive afterward to see if the queen has been received. The plan has had little success in Europe, he says, because the trouble was not taken to make two or three little holes in one end of the cage so the queen could be fed.

Free Hive-Entrances.—Thaddeus Smith relates in Gleanings that 55 years ago his father had hives set on flat stones, the hive being raised ¾ of an inch all around by nails at the four corners. These hives were left thus summer and winter, and he thinks there was never too much ventilation. Many of these hives remained 8 to 10 years thus without change, and there never was any loss in wintering unless stores ran short.

Split Sections.—While on this side the new-old no-beeway section is having the floor, in England quite a stir is being made over something that has been in limited use ten years or more, the split section. Some split the whole section in two, then put the sheet of foundation between the two parts and then bring them together. Others have only the top and two sides split. When sections were first used in this country, a saw kerf was made part way through the top-bar of the section to receive the foundation.

Paraffine Paper Over Sections.—Some discussion has been taking place in Gleanings with regard to the benefit of paraffine paper over sections for the purpose of preventing the bees from daubing propolis on the sections. It seems that Mr. Danzenbaker claimed great advantage for its use, and took out a patent thereon, the understanding being that bees were averse to touching paraffine. F. L. Thompson, in the American Bee Journal and elsewhere, reported adversely, and Dr. Miller said in Gleanings that his bees did not hesitate to put bee-glue directly on the paraffine surface, admitting, however, that he had not followed instructions to weight down the paper with some sort of packing. E. R. Root insists that instructions should be followed, but admits that they did not achieve a glittering success when using "a super that Mr. Danzenbaker had prepared as just right." In Dec. 15 Gleanings Lee L. Esenhower takes middle ground; thinks the paraffine paper effective not because of the character of the paraffine, but because it covers the sections air-tight; while in the same number S. D. Matthews is enthusiastic in praise, claiming a saving of several dollars in cleaning sections, and a higher price for the honey.

Beating Unfair Discrimination.—In Belgium, a tax on sugar makes it expensive for winter feeding. The law allows a rebate on sugar not directly consumed, but used in making confections, etc. Bee-keepers applied for same rebate on sugar used for feeding, but were refused. Le Rucher Belge now proposes to have a manufacturer of conserves make a syrup of prunes, 80 per cent. sugar, call it "syrup apicole," eat the prunes and feed the syrup to the bees, thus getting advantage of the cheap rate.

Keeping Queens Over Winter.—Doolittle relates in Gleanings that after trying somewhat faithfully in several ways he has never made a great success of keeping queens over winter except a single queen in a tolerably strong colony. With what is called a 4-frame nucleus he could sometimes succeed in getting queen and bees through to the harvest. Oftener they would waste away in late April or early May till they die entirely or were robbed. He could keep several queens caged all right till about February, when they would get uneasy and die with diarrhea, or the cluster would move to get at fresh honey and leave the caged queens to their fate. Then he tried nucleus boxes with frames 6 to 7 inches square, putting several over a strong colony in the cellar and tucking them up warm with blankets over them, but it ruined the strong colony, and out of 30 nuclei he only got through two queens. So he gives it up for a bad job and appeals almost pathetically for any little help that any one can give toward solving the problem.

Production of Wax.—Reidenbach thinks he has determined that wax is produced from pollen in the large intestine of the bee. In his opinion, honey serves only to keep up heat during its production, making only a small amount of honey necessary for wax-production during warm weather. Careful analysis of the contents of the large intestine fixt him in his decision. He thinks more wax might be secured without loss of honey if the bees always had opportunity for building, as in the super, and in late summer in warm weather toward the outside of the brood-nest. In a time of dearth, in very hot weather, he took from a strong colony half its combs, they being densely covered with bees. In place of the removed combs he gave frames with starters. The bees began lively to gather pollen, and in eight days had built a half-pound of beautiful comb, with no loss of honey. Having enough of the old combs for brood, the queen did not occupy the new combs. At the same time the other colonies lay idle.—Pfaelzer Bienenzucht.

The New Section and Fence.—Dr. C. C. Miller discusses these in Gleanings, not entirely agreeing with the editor as to their merits. The former raises some doubt as to the fence separator being cheaper in the long run, not quite seeing the force of the argument that the fence is cheaper because used year after year, while the plain separator is thrown away after one year's using. For he says that the plain separator can also be used year after year, only it's cheaper to buy new. He indulges in a sly dig at the editor's preference for section-holders over T supers, saying that while certain advantages claimed for the fence don't count for the T super, they do count for the section-holder, so the fence is a good thing for those who have nothing better than the section-holder.

The Doctor is hardly ready to admit that the new section will be more free from pop-holes in the corners, for on examining sections produced in a Danzy super with fence on one side of the sections, he found the pop-holes were worse than the common section with plain separators. The editor replies that observation has been the reverse.

Dr. Miller admits the saving in shipping-cases, and figures it down fine, making the saving $5.60 on 4,800 sections, which $5.60 will go a long ways toward paying the $1.00 per 100 for the fence. He also thinks there will be an advantage in the new section from the fact that when standing on a table one section cannot possibly be pusht into another, as may be the case if the sections have the usual inset. He thinks grocers may be inclined to use cuss words when trying to get the first section out of a case when the sections fit so tight together that there is no room to get the thumb-nail between them. To this the editor replies that all shipping-cases should be supplied with a follower and wedge, both for safety in shipping and for convenience in taking different sizes of sections.

GENERAL ITEMS

Notes from Western Iowa.

This section of the country enjoyed a very warm, dry autumn up to Thanksgiving Day, and since then we have had solid winter weather. To-day there is five or six inches of snow, and still snowing. Bees went into winter quarters in good condition, with plenty of stores.

I found the 10-frame hives very little heavier than the 8-frame ones, tho the 10-frame hives seemed to have the most bees. The yellower the bees, the heavier the brood-chamber, with me. I find the strong, cross colonies of hybrids very hard to get into the cellar, where one leaves the bottom-board off. I have carried them and set them carefully close to the cellar door, loosened the hive from the bottom, and let it set two or three hours, then carefully lift off the bottom without any jar whatever, and still they would roll out all the way down cellar and till the cellar was darkened. But they generally came out strong in the spring. I suspect a hundred or two make a pretty big show in the air, but are not enough to weaken the colony to any harmful extent.

I shall respectfully beg leave to use the 8-frame hives unless future experience differs from the past in regard to swarming, in which I could see no difference. The 8-frame size is heavy enough for me when it comes to stacking them up in the cellar.

I find the "home market" has its off years, as well as everything else. Two or three years ago I was wishing for honey to sell at 18 and 20 cents per pound, but now the home market is 10 cents, and nobody wants honey, either. If I should have pusht all my crop on the home market, in addition to what was already bound to sell there, it would have been less than 10 cents.

Bee-keepers are the only class I know of who are always urging others into their business. I have noticed those who are always booming the bee-business as the best paying thing on earth, always have something to sell to the prospective beginner. I have the same motive in not wanting so many to go in. So you see I don't claim to be "holier than thou." Let bee-keepers beware lest in inducing their neighbors to keep bees, and educating them in the business, they destroy their own. "He that provides not for his own is worse than an infidel."

E. S. Miles.

Crawford Co., Iowa, Dec. 3.

A Beginner's Experience with Bees.

I think I saw a little instance of late which I have not seen explained in the valuable Bee Journal—valuable because I would not sell the information I have obtained through its columns, since I subscribed for it in September, for four times the subscription price.

Bees will go a long way to sting me when a good chance is open, but I am such a lover of honey that I always thought if I ever got a chance to catch a swarm I would try it, and May 16 I got the chance, and with the aid of a visitor (an old bee-man) a box was made and the bees successfully gathered in. They staid and workt, of course. As I then had a colony of my own, I got bee-crazy at once, and closely eyed every paper and askt every man where I saw a bee-hive, for information.

Being unusually busy the past summer, I did not disturb the bees until in August, when I got a hive with instructions to get my bees into it; as it had movable frames, I could examine them at will. I came home, got ready, and the next morning I went at it.

I gave up smoking before I had the habit fairly learned, but of course it was all right to do anything to help the bees! So I hunted up an old keepsake pipe and home-

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spun tobacco (as I had no other), and put in a full day with the bees. One might think it strange that I could occupy all of the time between sunrise and sunset at that time of the year, but if any one doubts my statement, just let them make it known and I will explain.

But thinking of the old adage, "A faint heart," etc., I stuck to the bees, and we stuck together, and I have them yet; and as the desired information in regard to wintering is given in the Bee Journal of Nov. 25, I feel confident that they will be with me in the spring.

Nov. 24 I had occasion to call on a neighbor who was fortunate enough to get a colony last spring; they swarmed, so that he had three colonies in the fall. During a conversation with him he spoke of his bees, and askt me to go and look at them. On approaching the first hive he said, "This is the strongest; it has the bottom full, and has stored some honey besides."

Upon removing the cover, I said, "No live bees in that hive."

He replied, "Yes, it is nearly full."

The super was removed, and the frames taken out one by one, until all were out—10 in all (Langstroth, I think) and examined. Each frame had a full comb, and some honey on each side, in spots varying in size from about one to three inches in diameter, all near the top of the frame, the other parts being eaten out. There was a small bunch of dead bees in the top of the frames near the front of the hive, but not a live bee to be found. The hive was a new one, and apparently clean otherwise. The hive-entrance was open the full width. The man said he lookt at them about two weeks before, and they were all right. Were they robbed before it became cold, or what was the trouble? SUBSCRIBER.

Dane Co., Wis., Nov. 29, 1897.

Superseded Queen—Good Season.

In regard to the colony of bees I wrote about on page 809, having lost their queen, the weather turned warm here today and gave me a chance to examine the hive, and I found it contained a beautiful queen and a strong colony of bees, with plenty of winter stores. It seems to me now that the old queen died of old age, and the bees, seeing her condition, superseded her some time ago. This is another proof that two queens can exist in the same department of a hive at the same time, under certain conditions.

The past season was good in this locality, principally white clover, of which I never saw so much. My colonies yielded a surplus of 136 pounds per colony, all white clover extracted honey.

I have only a small apiary, situated at my home in Kentucky, a suburb of Cincinnati. I keep bees for pleasure only, still they yield a nice little sum every year, which pays me for any little trouble I may be put to in attending to them. Extracted honey sells at 15 cents per pound here, and I don't have to go out of the house to sell it either. J. N. LADENBURGER.

Newport Co., Ky., Dec. 8, 1897.

Appreciated All Around.

DEAR SIR AND PUBLISHER:—Please find enclosed money order for $1.00 (the price received for 10 pounds of nice honey sold) to renew my subscription for 1898. I see many write that they *can't* get along without the "Old Reliable." Now I *could* get along, but I don't intend to so long as I can trade the surplus labor of one colony of bees for 24 hours for 12 months' reading of the Bee Journal—52 copies of the American Bee Journal for one day's surplus, and a fine premium thrown in! Who of the many thousands in this "Grand Old Union of States," that have a few colonies of bees, would not be glad to give twice 10 pounds of their best honey to some old, practical bee-master, for a half hour's visit every Friday afternoon; who would go out somewhere among the bees with you, sit down and tell of his travels, experience, discov-

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A Fine Frontispiece.

As a frontispiece, printed on 80-lb., Ivory Enameled paper, is a half-tone, made from a photograph, of a comb badly infected with foul brood. A more perfect picture of such a comb has never been made. In short, the Review will now compare favorably with the high-class magazines, as regards typographical neatness and beauty. As to the value of the information that it contains, here is a partial list of

CONTENTS FOR DECEMBER.

Foul Brood.

Many descriptions of foul brood have been given, but none the equal for detail, exactness and clearness, of that given by Mr. R. L. Taylor in the Dec. Review. With this description, aided by the accompanying engraving above mentioned, no one need fail in positively identifying foul brood. Not only this, but Mr. Taylor also gives plain, simple and *exact* methods for getting rid of the disease.

The Plain Section.

Mr. L. A. Aspinwall has used this style of section for several seasons, and in the Dec. Review he enumerates its many advantages, and illustrates and describes the style of super and separator with which he uses it. He also illustrates a simple machine for cleaning propolis from sections of this style, nearly as rapidly as they can be handled.

First Premium Wax.

The finest wax, that of a clear, pearly, "dandelion yellow," wax that for two years in succession took first premium at the Wis. State Fair, was made by Edward Ochsner, and in the Dec. Review he tells exactly how it was rendered.

Shipping Comb Honey.

The bee-keepers who never have cause to mourn the loss of honey broken in shipment, would be more plentiful if all could read in the Dec. Review of the simple yet novel method employed by J. E. Crane to prevent the trucking and "dumping" of heavy crates of honey.

But there is not room to tell more; better send $1.00 for the Review for 1898, and receive the Dec. No. free; or, if you prefer to see that issue before subscribing,

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In silver or stamps (either U. S. or Canadian), and the Dec. No. will be sent you, and with it will be sent two or three other back numbers. This will give you a fair idea of the Review, and, if you should then wish to subscribe, the ten cents that you have paid may apply on the subscription. A coupon will be sent entitling you to the Review one year for 90 cents, if sent in during 1898.

W. Z. Hutchinson, Flint, Mich.

eries and mistakes in beedom, and what he had learned and read since his visit the week before, and answer any question you askt about bees—and just as he arose to go tell you where to get the best supplies cheapest, buy the best queens, and the price of honey in the several markets; then along in January, when there was little to do, come for a week's chat, board himself, and tell where you had made several mistakes, so you would be posted next time and avoid them; answer all the questions you askt him about bees you could think of, and many you would never think of?

I think the old man would be as popular as Santa Claus, and go away loaded about as heavily as some of our bees are loaded during white clover bloom.

Well, here's the "Old Reliable," ready to do all this, and more, for just one day's surplus from one good colony of bees. Let him in, cranks, and give him the 10 pounds of honey, and then write to him once in awhile, between his weekly visits, and tell him that you appreciate him and learned very much from his last visit. It will encourage him to greater effort to instruct you. And, above all, don't forget the 10 pounds of honey; pay him his just due in advance—he needs it to limber up his tongue and smooth his voice.

So opines an old soldier of '61.

CYRENE E. MORRIS.

Carroll Co., Iowa, Nov. 28, 1897.

Bee-Keeping in Virginia.

I have now 18 colonies of bees, and most of them will winter all right, but I have eight that I have given about 40 pounds of white sugar syrup. I mean 40 pounds of sugar dissolved in boiling syrup. I think they will stand it all right if the winter is not too hard. I had eight old colonies in the spring, and I saved 15 swarms, 13 in May and two the first of June. Some few went away. I thought I was going to get a fine lot of honey, but about the time they stopt swarming the dry spell set in, which lasted about 10 weeks, and the pastures all dried up; then when it rained it was a cold rain, and the weather continued cool some days, so the fall flowers were a complete failure, and I lost three of my last swarms by starvation before I knew anything of it. I thought, of course, that as long as the weather kept open they could get a living, but I found it not so. I also lost two colonies by what we call the "web worm." I have had bees for the last 18 years, and I have been bothered more this year with the worms than all the rest of the time. I use the Langstroth 10-frame hives, and always change my bees from one hive to another in early spring, so as to clean the hives of all filth. This part of the world is very flat; I have the James river on the southwest of me, and there is but little open land, and no such thing as pasture fields. Some few little truck farms are northeast of me, and the woods that are real near me on the east are almost all native pine and oak trees.

GEO. C. ELLIS.

Warwick Co., Va., Nov. 15.

Bees Killing Each Other.

There appears a strange article on page 663, which I wrote to a queen-breeder, yet it is true. In about 40 days after Italianizing one colony, they commenced war between the reds and blacks. It took the red bees two days to kill them off to the last bee. There were plenty of each race for a strong colony, but the blacks didn't show any fight at all, but seemed willing to be superseded. After that they got to killing their own bees, and as I said before, it was not a case of robbing, as some would think, as there were no yellow bees in this settlement except mine. I had Italianized other colonies, but their yellow bees were too young to work.

I might be mistaken about the super controlling the fighting, and I might have been mistaken in there being too many bees. I was transferring at that time to movable-frame hives, and the red bees would sneak into the black colonies and get some honey. If there is such a thing as bees scenting each other, it is just possible they lost their scent by being in the black colonies too long, or got the scent of the black bees on them. The red bees seemed to be heavily loaded when they returned home, but when they alighted their red sisters would begin to nibble on them, and in a very short time they would sting them.

Some one says I was mistaken; that they were red bees from somewhere robbing mine. No, indeed. Some one says they were diseased. I think not. I never knew but one bee-disease in these cold mountains; it is a bad one, too—starvation. Very likely some of the old bee-keepers are acquainted with it. It is very bad on late swarms and old colonies that have swarmed too often, if not in the right man's hands, for we have no fall honey in this locality.

The fighting bees are in good condition, and very strong, and as healthy as I ever had. When I finisht transferring, I thought I had advanced a little in bee-culture.

Blount Co., Tenn. G. W. WILCOX.

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We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Alsike Clover........	.70	$1.25	$3.00	$5.75
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White Clover...	.90	1.60	3.75	7.00
Alfalfa Clover........	.60	1.00	2.25	4.00
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PATENT WIRED COMB FOUNDATION
Has No Sag in Brood-Frames
Thin Flat-Bottom Foundation
Has No Fishbone in the Surplus Honey.
Being the cleanest is usually worked the quickest of any Foundation made
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Sole Manufacturer,
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PACIFIC RURAL PRESS,
330 Market St., - SAN FRANCISCO, CAL.
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Several Notes and Comments.

I brought my 16 colonies out of the cellar on March 28. They were in good condition except two. I had the first two swarms on June 11, and the last one on July 24, a second swarm from a prime swarm. I doubled up some and some did it themselves, so I had 42 colonies, but one that had swarmed three times and one twice, were queenless. I took off over 500 pounds of comb honey, and have sold 350 pounds for 10 and 11 cents.

The bees had a good play Nov. 20, and on the 23rd I opened the cellar window, and they went through into the cellar. I hived three swarms without any covering, not one bee stinging me, and I don't care if I have half a dozen, it is just as if a mosquito bit me; it swells but little on the fleshy places. Not any of my swarms escaped, even if I don't use propolis.

When my hives are ready I put them into the cellar, so they are cool when the bees swarm. Then I wet old carpet and put it over the cover. There was something new to me this summer. When I hived my first second-swarm, about six bees with a queen came out of the hive; after this there came bees out of the entrance, which were stung.

Does selling comb honey by the section mean for one pound, even if it doesn't weigh it? If so, that isn't right.

In Appleton, 13 miles from here, a farmer's wife sold eight full sections of comb honey for 50 cents to a consumer. It is good that not all farmers are fit for bee-keeping.

When I took honey from one hive last summer, in wide frames, holding eight sections, I renewed them with starters, but took three frames out and put three in where it was already workt in the sections. It commenced to get dark, so I held the frames before the entrance, some bees crawled off and "called" at the entrance, but the rest came to the other end, which I held in my hand. I put a stick under that end, and left them over night; early in the morning they were there yet. That brought me to the conclusion that bees can't bear.

The American Bee Journal is what it claims to be on the first page: "Devoted," etc. That is why I like it.

WM. DUESCHER.

Brown Co., Wis., Dec. 14, 1897.

Bees and Horticulture, Etc.

Some of the late numbers of the American Bee Journal are worth the whole subscription price. I was especially pleased with Mr. Taylor's paper on "The Relation of Bees to Horticulture," on page 757. I have handed it to the editor of the Farm and Orchard, at Las Cruces, and it will appear in that paper soon. There has been considerable complaint around here that bees injure or damage the grapes, some even thinking that the bees injure fruit by

THE PROGESSIVE BEE-KEEPER

Is a 28-page monthly bee-journal publisht at Higginsville, Mo.—price 50 cts. a year. With the year of 1898, we begin the eighth volume, hence it is past the experimental stage. **R. B. Leahy** and **G. M. Doolittle**, editors. Some of the features of 1898 will be a continuation of "**Wayside Fragments**," by **Somnambulist**. "**Eperienee and Its Lessons**," by **R. C. Aikin**. This series of articles will be reviewed by Mr. Doolittle, which is practically giving *his* experience with its lessons. "Experience and Its Lessons," as reviewed, will be a gold-mine for beginners and advantageous to those more advanced in bee-culture. The somnambulist articles are written in a pleasing style, as none but "Sommy" could write them. They are highly entertaining and instructive. **Dr. C. C. Miller** and other popular writers also cotribute to its columns. The PROGRESSIVE is a popular journal at a popular price. Printed in the highest art, on beautiful paper. Fearless in its character, newsy in its contents, and artistic in its make-up. Remember the PROGRESSIVE BEE-KEEPER is but 50c. a year. The PROGRESSIVE and that "one only" book for beginners, the **Amateur Bee-Keeper**, by **Prof. J. W. Rouse**, both for 65c. A sample copy of the PROGRESSIVE for your name, and a beautiful, illustrated catalog of apiarian supplies for the asking. Address,

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1A26t WALKER, Vernon Co., MO.

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with dovetailed body and supers, and a full line of other Supplies, and we are selling them CHEAP. A postal sent for a price-list may save you $$$$

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Cupid's Dart sped through space,
Aimed with much precision;
Its target—in a conspicuous place—
Was pierced beyond recognition.
Cupid at once withdrew the arrow,
Fearful of the result of his aim,
But the work was done—the escape narrow—
Perhaps you can do the same.

☞ The most interesting puzzle for sweethearts out. Sent on receipt of 10 cents, postage prepaid. **GINDER & BOTTOME,**

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For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 25 cents per pound, CASH; or 27 cents for whatever part is exchanged for the Bee Journal, Honey, Books or Seed, that we offer. If you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

GEO. W. YORK & CO.

118 Michigan st., CHICAGO, ILL.

Bee-Keepers' Photograph.—We have now on hand a limited number of excellent photographs of prominent bee-keepers—a number of pictures on one card. The likeness of 49 of them are shown on one of the photographs, and 121 on the other. We will send them, postpaid, for 30 cts. a card, mailing from the 121 kind first; then after they are all gone, we will send the 49 kind. So those who order first will get the most "faces" for their money. Send orders to the Bee Journal office.

See the premium offers on page 11!

taking the nectar from the blossom. It is very hard to convince this class of people that they are wrong, especially for a bee-keeper. They think he is prompted by self-interest, and a desire for gain at their expense.

If all the charges which I have heard brought against bees were true, I would quit the business quick. It would not suit me. I am not built that way. I believe the same would be true of a large majority of the bee-keepers.

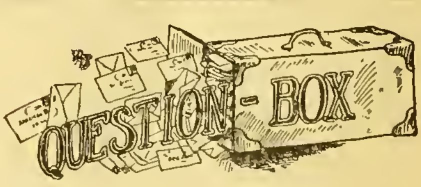
Mr. Golden's method of controlling increase and producing comb honey is the most valuable method of management that has been advanced in 10 years. So I think, tho I practice the plan a little differently from the way which he gives. I believe I have improved on it, at least for this locality, or anywhere where bees are greatly inclined to swarm, and seem stubborn when returned. I believe the Golden plan, or some other that is practically the same, that is, some modification of it to suit conditions in different localities, is sure to come into general use.

I have practiced the plan given on page 708, by "Sage-Brush," for getting colonies supplied with worker-comb without the use of foundation. I consider it much better than giving full sheets of foundation.

I have most of my combs built in nuclei, one at a time, according to Mr. Doolittle's plan, and they are perfect. It is very seldom that I put in a full sheet of foundation.

W. C. GATHRIGHT.

Dona Ana Co., New Mex.



In the multitude of counsellors there is safety.—Prov. 11-14.

Cutting Out Drone-Comb—Are Drones of Value in a Hive?

Query 66.—1. Do you practice cutting out all drone-comb from your colonies?

2. Don't you think that some drones stimulate a colony, and by their extra heat are a benefit to a colony in a cold, backward spring?
—NEW ENGLAND.

E. France—1. Most of it. 2. No.

Mrs. L. Harrison—1. No. 2. I do.

Eugene Secor—1. No. 2. It may be, but I am not sure.

R. L. Taylor—1. No. 2. I would prefer workers to the drones.

Prof. A. J. Cook—1. Very nearly. 2. I prefer workers to drones.

G. M. Doolittle—1. I allow 4 to 6 square inches of drone-comb to each hive. 2. Theoretically, yes; practically, no.

Jas. A. Stone—1. I do not. 2. I cannot say as to that. Their presence would certainly be a help in keeping up the heat in the hive.

C. H. Dibbern—1. I cut out all the drone-comb but a very little. 2. Yes, in early spring I like to have a few drones in every colony, as it seems to give them life and energy.

W. G. Larrabee—1. No, but I have very little drone-comb, as I use full sheets of foundation in the brood-frames. 2. I would rather have the same number of workers.

Dr. C. C. Miller—1. Yes, if I've time. 2. I never saw any excitement caused by drones except when the workers were killing them off. A pound or pint of workers would make as much heat as the same quantity of drones, and where can you get drones in a cold, backward spring?

J. M. Hambaugh—1. I do when not too shiftless. 2. There will always be sufficient drones for practical purposes. I am not sure they could be of any use in the manner mentioned.

Dr. J. P. H. Brown—1. My rule is to cut out all drone-comb, but there will always be more or less drone-cells formed around the margin for their development. 2. I agree with you.

Emerson T. Abbott—1. No. 2. In a "cold, backward" spring there would not be any drones, in all probability. They may be some benefit, and they may not. I am free to confess I don't know.

Wm. McEvoy—1. No. I shut out all the drone-comb by filling the frames *full* of foundation. 2. No. As a rule, when the colonies have some drones reared they are pretty strong in worker-bees, and don't need the heat of the drones.

A. F. Brown—1. To a certain extent nearly all colonies will manage, notwithstanding the best of care by the apiarist to the contrary, to have a few square inches of drone-comb somewhere on the frames. 2. A few drones in a hive do no harm, in my estimation.

J. A. Green—1. I used to, and would prefer to do this now, but most of my colonies have not had a brood-frame removed in two years or more. 2. You cannot keep all drones out without extraordinary care. Workers are just as warm as drones, and a lot more useful otherwise.

Chas. Dadant & Son—1. Yes, and replace it with worker-comb as much as possible. 2. No, No, NO. You will always have more drone than you need if you cut out drone-comb ever so carefully. As to the heat, we would rather have that of the workers reared in the same space.

Rev. M. Mahin—1. I do not. 2. I am not able to give an authoritative answer. I have had very prosperous colonies that had large numbers of drones, but if nearly all of the drones had been workers, I think they would have been more so. I think it wise to restrict, but not to suppress the drones.

J. E. Pond—1. I do not. 2. I think Nature provides the rule, and attempts to follow it, by allowing a small amount of drone-comb in the brood-chamber. I do not, however, think that any extra heat produced by drones amounts to anything of value, my idea being that a colony should contain some drone-comb in order to be normal.

G. W. Demaree—1. I have quit doing so much work with the bees. If I find a surplus of drone-comb in a hive I remove it, giving worker-comb in its place. The work is done at such times as gives the least fuss and labor. 2. A reasonable number of drones in a hive is a *natural* and *normal* condition in their season. I have had colonies do well with large numbers of drones, and do equally well with few or no drones.

Colorado.—The Colorado State Bee-Keepers' Association will hold their annual meeting in Room 31, Capitol Building, Denver, Jan. 17 and 18, 1898. The meeting begins at 9 a.m. There is important business for this meeting, and all should be present.

R. C. AIKIN, Pres., Loveland, Colo.
F. RAUCHFUSS, Sec., Elyria, Colo.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Ill., Dec. 13.—Fancy white 11 to 12c. No. 1, 10c.; fancy amber, 8 to 9c.; No. 1, 7c.; fancy dark, 7c. Extracted, white, 5 to 6c.; amber, 4 to 5c.; dark, 4c. Beeswax, 26 to 27c.

The demand for comb honey is not satisfactory, and it can be bought at even lower prices than quoted, where it is not in the hands of regular dealers. There seems to be no outside demand. Extracted without special change. Beeswax is scarce.

Milwaukee, Wis., Dec. 13.—Fancy white, 12 to 13c.; No. 1, 11 to 12c.; fancy amber, 9 to 10c.; fancy dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 4½ to 5c. Beeswax, 25 to 27c.

This market has been fairly sustained on honey since our last report. Values remain about the same, as there has been a very good consumptive demand, especially for extracted, while the comb honey has seemed to accumulate with increast receipts, and we feel to meet the demand even if at a reduction from quotations. There seems to be more demand from those who eat honey than in former seasons, which is a good feature of the trade which we desire to encourage. We are expecting a good trade from this forward.

Cleveland, Ohio, Dec. 15.—Fancy white, 12 to 12½c.; No. 1, 11 to 12c.; No. 1 amber, 9 to 10c. Extracted, white, 6 to 7c.; amber, 4 to 5c. Beeswax, 22 to 25c.

New York, N. Y., Dec. 22.—Fancy white 11 to 11½c.; off grades, 9 to 10c.; buckwheat and mixt, 6½ to 7c. Extracted, California white, 5 to 5½c.; light amber, 4½ to 4¾c.; white clover and basswood, 5 to 5¼c.; buckwheat, 4 to 4½c; Southern, 50c. a gallon. Beeswax is in good demand at 25 to 27c.

Our market remains quiet. Fancy grades of white comb are about cleaned up, and these would find sale on arrival at quotations. We have a large stock of buckwheat, mixt, and off grades of white, and, as the demand for these is very light, we cannot encourage further shipments for the near future. Extracted of all kinds is selling fairly well.

Minneapolis, Minn., Dec. 15.—Fancy white, 11 to 12c.; No. 1, 10 to 11c.; fancy amber, 10c.; No. 1, 9½c.; fancy dark 9 to 9½c.; No. 1, 8 to 9c. Extracted, white, 5 to 6c.; amber, 4 to 4¾c.; dark, 4c. Beeswax, 23c.

Market holds firm at above prices. Good demand for extracted. Wax is quiet but firm at 23c.

Kansas City, Mo., Dec. 15.—Fancy white, 10½ to 11c.; No. 1, 10 to 10½c.; fancy amber, 9½ to 10c.; No. 1 9 to 9½c.; fancy dark, 8½ to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

St. Louis, Mo., Dec. 13.—Fancy white, 12 to 12 1-2c.; No. 1, 10 1-2 to 11 1-2c.; fancy amber, 9 1-2 to 10c.; No. 1, 9c.; fancy dark, 8c. Extracted, white, 5 to 5 1-2c.; amber, 4 to 4½c.; dark, 3 1-2 to 4c. Beeswax, 24 1-2 to 25c.

We would advise prompt shipments of honey. We do not see any probabilities of better prices. The stock of honey is ample for the demand.

Albany, N. Y., Dec. 13.—Fancy white, 12 to 13c.; No. 1, 11 to 12c.; fancy amber, 8 to 9c.; No. 1, 8c; fancy dark, 8c.; No. 1, 7½ to 8c. Extracted, white, 5 to 6c.; amber, 4½ to 5c. dark, 4 to 4½c.

There is an ample stock of comb on hand and selling freely at quotations. Extracted is not plentiful and from information received there is not much in the hands of producers.

Buffalo, N. Y., Dec. 24.—Strictly fancy 1-pound comb honey is more active at mostly 10c., occasionally 11c., but all other gradas are dormant and have to be cut to almost any price to move them, ranging from 8c. down to 6c. Extracted is moving slowly at 5 to 6c. for fancy; dark, 4 to 4½c. A liberal quantity can be sold; and, of course, the low grades can be forced off for what they will bring, if owners cannot do any better.

There is no selling pressure of consequence on desirable lots of water white, either comb or extracted, such being held as a rule at full quotations. Amber grades are in greater supply than the demand and market for this class presents an easy tone. Dark qualities are in poor request, despite low asking figures. Beeswax is firm at current quotations, with very little offering, either from first or second hands.

Philadelphia, Pa., Nov. 13.—Fancy white, 13 to 14c.; No 1, 12c.; fancy amber, 10c.; No. 1, 9c.; No. 1 dark, 8c. Extracted, white, 5 to 5½c.; amber, 5c.; dark, 4 to 4½c. Beeswax, 27c.

Honey is arriving very freely; market is a little off. Beeswax is in good demand.

Boston, Mass., Nov. 8.—Fancy white, in cartons, 13c.; No. 1, 11 to 12c.; fancy amber, 10c. Extracted, white, 6 to 7c.; amber, 5 to 5½c. Beeswax, 28c.

No. 1 and fancy honey has sold well during the past 10 days, but off grades and light weight is going slowly. Beeswax is in good demand and but little here.

Detroit, Mich., Nov. 9.—Fancy white, 11 to 12c.; No. 1, 10 to 11c.; fancy amber, 9 to 10c.; No. 1, 8 to 9c.; fancy dark, 7 to 8c. Extracted, white, 5 to 6c.; amber, 4 to 5c. Beeswax, 25 to 26c.

Indianapolis, Ind., Nov. 8.—Fancy white, 11 to 13c.; No 1, 9 to 10c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25c.

Demand for fancy white comb honey and fancy white extracted is exceptionally good, while there is almost no demand for dark or amber comb or extracted honey.

Cincinnati, Ohio, Jan. 8.—There is no change in prices, but rather a slow demand for all kinds of honey. We quote 10 to 13c. as the range of prices for best white comb honey, and 3 1-2 to 6c., for extracted, according to quality. Beeswax is in fair demand at 20 to 25c. for good to choice yellow. Cincinnati is no place for dark comb honey.

List of Honey and Beeswax Dealers.

Most of whom Quote in this Journal.

Chicago, Ills.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.
HILDRETH BROS. & SEGELKEN,
120 & 122 W. Broadway.

Kansas City, Mo.
C. C. CLEMOMS & Co., 423 Walnut St.

Buffalo, N. Y.
BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.
CHAS. DADANT & SON.

Cleveland, Ohio.
A. B. WILLIAMS & Co., 80 & 82 Broadway.

Philadelphia, Pa.
WM. A. SELSER, 10 Vine St.
Mr. Selser handles no honey on commission

St. Louis, Mo.
WESTCOTT COM. CO., 213 Market St

Minneapolis, Minn.
S. H. HALL & Co.

Milwaukee, Wis.
A. V. BISHOP & Co.

Boston, Mass.
BLAKE, SCOTT & LEE., 57 Chatham Street.

Detroit, Mich.
M. H. HUNT, Bell Branch, Wayne Co., Mich.

Indianapolis, Ind.
WALTER S. POUDER, 162 Massachusetts Ave.

Albany, N. Y.
CHAS. McCULLOCH & Co., 380 Broadway.

Cincinnati, Ohio.
C. F. MUTH & SON, cor. Freeman & Central Avs.

THE MONEY QUESTION is easily settled by the poultry question. You can settle the poultry question by reference to our Mammoth Annual Poultry Guide Contains 100 pages printed in finest colors, 30 varieties of poultry and how to treat them in health and disease and how to make money with them. Poultry house plans, recipes; postpaid 15c. John Bauscher Jr. Box 94, Freeport, Ill.
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105 Park Place, is the street,
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Who is prepared to ship you, on short notice, **anything** in the apiarian line.

Are YOU the man who wants to buy?

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Write for Catalogs, Quotations, etc.

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HUDSON, St. Croix Co., WIS.

Please mention Bee Journal when writing.

Christmas! New Year!

"Done gone." The next thing to think about is fencing. Our new catalogues are ready, calendars are ready, **everything** is ready **here.** Are you? Ask anything you want to know. See "ad" in next issue.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Please mention Bee Journal when writing.

COMB FOUNDATION **Wholesale and Retail.**

Working Wax into Foundation for CASH **A Specialty,**

At Reduced Prices during the Winter.

My Foundation will SPEAK FOR ITSELF, and prices are O. K. So do not fail to write for a Catalog with prices and samples.

Beeswax taken in Exchange for Foundation or any other Supplies.

GUS DITTMER,
AUGUSTA, WIS.

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Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT** Cash for Beeswax. BELL BRANCH, MICH.

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21st Year Dadant's Foundation. 21st Year

Why Does It Sell So Well?

Because it has always given better satisfaction than any other.
Because **IN 21 YEARS** there have not been any complaints, but thousands of compliments.

We Guarantee Satisfaction.

What more can anybody do? **Beauty, Purity, Firmness, No Sagging. No Loss. PATENT WEED PROCESS SHEETING.**

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BEE-KEEPERS' SUPPLIES OF ALL KINDS.

LANGSTROTH ON THE HONEY-BEE, Revised.

The Classic in Bee-Culture—Price, $1.25, by mail.

CHAS. DADANT & SON,
Please mention the Am. Bee Journal. **HAMILTON, Hancock Co., ILL.**

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SECTIONS, SHIPPING-CASES,
—AND—
BEE-KEEPERS' SUPPLIES.

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—WHO CAN TURN OUT—

FENCES **(Cleated Separators)**

—AND—

PLAIN SECTIONS

(Sections without Insets)

FOR 1898.

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THE A. I. ROOT CO.
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New 1898 Catalog **Largely Re-written, out by January 15.**

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

Publisht Weekly at 118 Michigan St. GEORGE W. YORK, EDITOR. $1.00 a Year—Sample Copy Free.

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CONTRIBUTED ARTICLES

The "Golden" Section-Honey Cleaner.

BY J. A. GOLDEN.

I herewith present a picture of the greatest labor-saving piece of machinery for bee-keepers that has ever been shown to the fraternity. Every man, woman and child that knows anything about preparing section honey in first-class style for the markets, knows that scraping sections is a tedious kind of work, or at least that is my version of the matter; and when I got ready to dress my crop of nice, white clover honey of 1897, it really made me tired to think about it. I wasn't able to hire, and of course I was feeling pretty badly about having all that unpleasant work to do. When I retired I couldn't sleep, and as I was tossing about, my good wife wanted to know if I were sick, or whether I had the fidgets. I said I had the fidgets, I guest, and the result of that wakeful night brought to light a section-cleaner—just what you see in the picture.

Having an old sewing-machine table, I nailed some boards together and cut out a wheel, which is 36 inches in circumference, and has a 4-inch face. I attacht it on the old table, covered the face of this wheel with medium-fine sand-paper, by gluing it on, and arranging a cover so that the face of the wheel protruded from 1/16 to ¼ inch, as shown by the picture, where Flora is in the act of passing a section over the wheel. (Just as I was ready to take the view, Flora turned her head and said, "Tell Mr. York that I am just pretending to clean this section"—when I toucht the button and caught her and her smile.)

It will be observed that there is plenty of room for a full super of sections to be placed on the table at a time.

Now as to how the machine works. Well, it was just fun to clean sections with it, and so clean and bright that no one could tell by looking at them afterwards, that they ever had propolis on them, excepting at the scallops, which have to be scraped out. But if the plain, no-bee-way section is used, a knife will never be brought into use, as the machine does it all, and very speedily.

There isn't a bee-keeper in the world who likes nice, clean section honey, that after seeing this machine and its work, but would make or procure one. As I am generous to bee-keepers, I here publicly present to them the right to use, and also how to construct it. If there is any bee-keeper in America, or any other country, that after dressing a half dozen sections of honey isn't in love with the machine and its work, let him "arise" like Mr. Doolittle's old man, and explain the objections.

I had intended to send a picture and explanation of this device last summer, but having quite a serious time in a financial way, caused by dishonest persons (but thanks to my bees, every dollar has been canceled), the matter was forgotten until I received the December Review, where I was surprised to see that L. A. Aspinwall, of Michigan, had invented nearly the same arrangement.

In conclusion let me add: Bread and table knives, pen-knives, scissors, or any small edge tools, can be quickly ground on this wheel the same as an emery wheel, so our women-folks will now have no excuse for not having sharp knives, as any one who can run a sewing-machine can run this section-cleaner.

Morgan Co., Ohio, Jan. 5.

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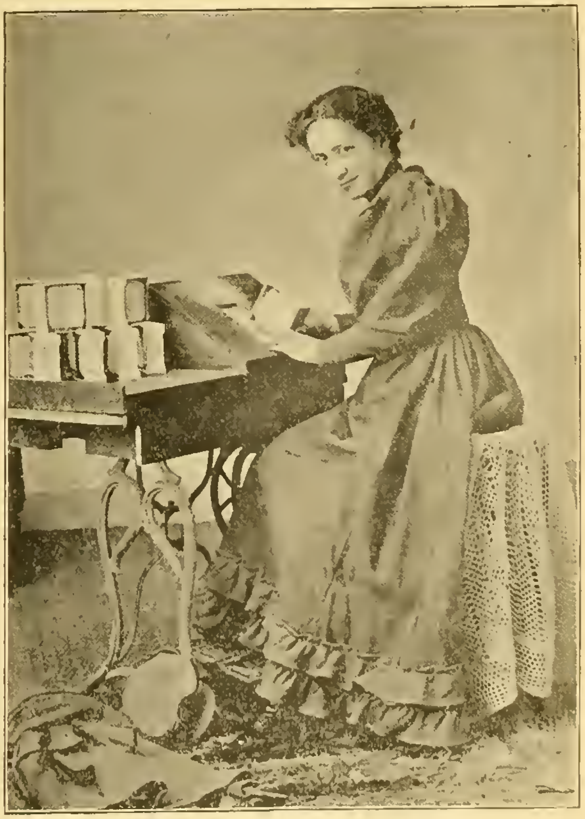
The Expenses of Bee-Culture—Does it Pay?

BY C. P. DADANT.

Does bee-keeping pay? This is a question which is often on the lips of a beginner, and on which many an old bee-keeper is ready to take the negative. But this is not to surprise any one, for there are plenty of farmers who are ready to tell you wheat-growing doesn't pay, and who still continue to grow wheat.



The Golden Section Cleaner.

I propose, in this article, to show that bee-culture, if properly managed, does pay, even at the low prices of honey. We are producers of extracted honey almost exclusively, and as extracted honey is now as low in price as it ever was, if we can make it pay now we ought to be satisfied that it will pay at any time.

The expenses of an outfit for bee-keeping, when running for extracted honey, are about as follows, figuring upon an apiary of 80 colonies, which is about the number that is best suited to all sorts of locations, and is probably the limit of numbers that an efficient man can properly examine and attend in a day's labor at each visit:

80 colonies of bees in large extracting hives	$400 00
160 supers with combs for same, two to each hive	160 00
Extractor, pans, funnels, smokers, veils, etc	20 00
Empty hives (20)	20 00
Total	$600 00

The labor we give to this number of colonies, when running for extracted honey, is about as follows:

	Days.
In February, examination to see that all is well	½
March, ditto, cleaning out dead colonies, feeding needy ones	1
April, taking out packing, examining queenless colonies	1
May, removing drone-combs, transferring small patches, looking up young queens, feeding, giving room to strong colonies	2
June, putting on supers, making a few artificial swarms	3
July, removing supers, extracting honey, returning supers	4
August, one examination for all purposes	1
September, equalizing, removing supers, extracting honey	3
October, removing empty supers, helping weak colonies, feeding needy nues	2
November, putting into winter quarters	2
Total	19½

A total of 19 1-2 days. This is the outlay in labor. Figuring it at $2.00 per day, the labor amounts to	$39 00
Interest on the capital, at 7 per cent	42 00
Annual sinking fund to replace hives as they grow old	20 00
Total expenses	$101 00

The average crop of honey extracted one year with another is with us about 50 pounds per colony. Most practical apiarists put it at a much larger figure, even with comb honey, having better locations, but ours is probably a fair one. So we may count on an annual crop for the 80 colonies of 4,000 pounds of honey. Figuring this at 5 cents per pound, we have $200, or about double the amount of the actual expenses for the year. If you have done the work yourself it will figure the wages for work necessitated at about $7.00 per day, all expenses paid. I figure nothing for help needed when extracting, because I do not figure any profit from the beeswax. We have always found that the beeswax produced by extracting, which amounts to over one pound per hundred pounds of honey, more than pays for the help needed, and is in proportion to this help.

As a matter of course, there are seasons when there is next to no surplus honey, and in such seasons less help and less labor is needed. But there are also seasons when the crop is much greater, and in such years the additional beeswax, harvested from the cappings, more than makes up for all the extra labor. In the best honey season we ever had, which was in 1889, if my recollection is right, we had 600 pounds of beeswax from the cappings of something like 48,000 pounds of honey. This at 25 cents per pound made a snug little sum, and we know it not only covered our extracting labor, but also paid for the odds and ends.

When figuring up the labor, we gave the actual time employed by us in work of this sort. Much more time may be spent on the bees, and profitably too, for they usually repay their owner for the attention given them. There are plenty of bee-keepers, "dyed in the wool," who spend a great deal more of their time in the apiary than is absolutely necessary. These are the true ones, the "fast colors," "warranted to wear," who would keep bees in Greenland if they went there to live. But I do not know that we should take all of their time into account; for their labor is its own reward.

I know an old bee-keeper, a good friend of mine, who after he has put his bees into the cellar for winter, goes to see how they are every morning after he gets up. If he reads this article he will probably recognize himself, and perhaps many of our readers will think it is of themselves I speak. I askt him once, when I accompanied him with a little lamp in his silent visit, whether he did not think that this daily visit was rather injurious than otherwise, as it was likely to disturb the bees more or less. He evaded my question.

In keeping bees in the way above mentioned, if they are properly managed, the summer increase should make up for winter losses. It does with us, usually. The number of colonies should not vary more than 20, say from 75 to 95. If they become less numerous a little more time and expense should be put upon them till they have regained their loss. If they become more numerous they may be equalized with other apiaries less fortunate.

Readers who are unaccustomed to bee-culture may think that this is only theory, but it is bona-fide practice. We have carried on this method for 25 years or more, with from 3 to 6 apiaries, and the wages figured in this article are the wages we have paid for this kind of work for 15 or 18 years past.

Hancock Co., Ill.

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The Use of Shallow Extracting-Frames, Etc.

BY EDWIN BEVINS.

In reply to Mr. Tyrrell's question (see page 732, for 1897) as to why I prefer to use frames 6 inches deep for extracting, I will say that in the production of extracted honey I prefer to use a hive of greater capacity than the 8-frame or even the 10-frame Langstroth. I use some of the Dadant hives, which are 21 inches long and 12¼ inches deep, outside measure, and take 10 frames.

I now make for my own use a modified Dadant hive, 20 inches long and 12 inches deep, to take 10 frames. This change was made because these hives take the same length of top-bar and bottom-bar as the Langstroth or dovetailed hive. Every supply dealer handles these, and any supply manufacturer will cut the end-bars of the proper length at a trifling additional cost. Besides, if one wants to use these hives for comb honey, they will take the same sized super as the 10-frame Langstroth.

It is impracticable to tier up hives of this capacity. The frames are too large for convenience in extracting, and putting on another hive gives too much additional room at one time. Hence, I use a super taking 10 frames six inches deep. These frames are much nicer to handle than the Langstroth frame, and of course much nicer than any frame of a larger size than the Langstroth.

When using the 8-frame Langstroth hive for extracted honey it is almost, or quite, a necessity to use bee-zinc, and if bee-zinc is used the 8-frame hive does not give the queen sufficient breeding-room. This is true of most of the queens in my yard. How it may be with those in Mr. Tyrrell's I am unable to say. If his queens are of only 8-frame Langstroth hive capacity he had better turn his attention to their improvement.

With brood-chambers the size I have given, the queen so seldom goes above that bee-zinc is not needed. Some claim that bees will work just as well with the zinc as without it, but I have not found it so.

On the subject of the production of all extracted honey it is not worth while to make any further remarks. It was not expected that those already made would influence anybody's actions.

Yes, Mr. Tyrrell, if you kick those 8-frame hives when full of bees and honey, better kick them very carefully. Valor is not half so commendable as discretion in a case like this.

Decatur Co., Iowa.

⁂

Marketing Honey—Influence of Early Reports.

BY C. DAVENPORT.

During the last few years great progress has been made in the science of producing honey; few if any other branches of agriculture have kept pace with us, but in one most important respect—the marketing of our product—we are not much farther advanced than were the bee-keepers of 50 or even 100 years ago; and altho of late our product is secured in a much more convenient and attractive form, which requires more labor and expense to the producer, the price has in the last few years steadily declined until at present it does not much, if any, exceed the cost of production, at least to those in the Northern and Middle States. Numerous reasons have been advanced as to the cause or reason of this steady decline in price, such as overproduction, under-consumption, adulteration, increast production, cheaper prices of fruit, etc. Now, in my opinion (and also in the opinion of all the bee-keepers with whom I have discust the matter) many bee-keepers themselves have unintentionally done a great deal towards lowering the price of late, by reporting large, or very large, expected crops. I think all will admit that the actual crop, as a whole, has been greatly overestimated and exaggerated the last two years.

If I am right, all the large buyers and dealers in honey take one or more bee-papers, and while it is not likely that they read them as closely as a bee-keeper does, they look them over closely enough, no doubt, to see what the crop is expected to be, and when they see reports of such bright prospects, and accounts of immense yields coming in, or expected, they naturally decide that the actual crop will be very large, and hesitate to buy unless at a very low price, or if they receive shipments on commission they feel that it will be best for the shipper if they sell as soon as possible, even at a low price, for they may not, and probably do not, know much about the great uncertainty of a honey crop.

Of course, bee-keepers themselves know that no matter how bright or favorable the prospects are, there is no certainty of the crop until it is actually secured, and, with comb honey, I might say until it has been taken off the hives and graded, for sometimes it may happen that there will be a fair crop stored in the hives in sections nearly ready to come off, when the flow may suddenly cease, and a large part of the sections may be partly or wholly unsealed; or in some cases the honey may be sealed and off the hives, and upon coming to grade it part of the crop may be unsalable on account of bee-bread in the sections. Such instances have occurred with me, and no doubt with thousands of others.

The past season a man wanted to buy one of my yards, with the bees, hives, supers, honey and all, complete. As it was in the best part of the white clover flow, this yard was being run for comb honey, and an experienced bee-keeper who has handled bees the best part of his life, and myself, spent half a day in looking over the yard and estimating the amount of honey we thought was actually on the hives. His estimate was 2,500 pounds; mine, 2,100. The sale was not made at that time, and owing to a sudden cessation of the flow, and bee-bread, there was only about 1,300 pounds of salable honey, and but little of this would grade even No. 1.

Now, another thing that dealers and buyers do not know when forming their estimate of the crop from the reports sent to the bee-papers, is the fact that some of these reports are from beginners who have not had experience enough to form any correct estimate of the crop, or even the prospects of one; or some of the most favorable estimates may come in from old, experienced bee-keepers who have but a small number of colonies, and overlook the fact that some seasons 20, or even 40 or 50, colonies may secure a fair crop, when a yard or range fully stockt in the same, or a locality fully as favorable, may secure but a small crop, or none at all.

To show that I have reason to believe that some beginners are not able to form a correct estimate of even the prospects, I will relate an incident that took place here last spring. A young man living but a few miles from me, who knew nothing about bees, bought 15 colonies, and expected in the course of time to make his fortune, or at least a good deal of money out of them, for the man from whom he bought the bees helpt him to figure out how he could increase them to over a thousand colonies in a few years, if he wisht, when the revenue from so many, even if but a small amount per colony, would be considerable.

He came down to see me a number of times, and was very enthusiastic about his bees and the prospects. He used to look over my bee-papers, and intended to subscribe for all the bee-papers himself, as soon as he sold some honey; and as some of these papers had a good deal to say about dishonest commission men, and developing the home market, he decided not only to sell his crop in the home market, but to sell *at once* for fall delivery, the large crop of comb honey—1,500 pounds at least—which he felt sure to get; and actually did travel over a large extent of territory in the spring, taking orders for fall delivery, at 8 cents per pound for white honey, clover or basswood—"customer's choice"—and 7 and 6 cents for amber and dark, with special prices on 100 pounds or more.

Now, last spring was one of the most unfavorable for bees that I have ever known; there were hard frosts every few nights, until the night of June 1, when we had our last severe one, and altho the bees were pretty strong in stores the previous fall, I had to feed nearly 2,000 pounds to the colonies in the home yard.

On one of his visits I askt this young man if his bees had enough stores. He said they had plenty, for the man he bought them from told him that each colony had enough to last it until June, even if they were unable to gather any until then. But, besides, he said that they were bringing in more honey, almost every day, than they could use, in fact some days, for awhile, they were bringing it in so fast that he had to enlarge the entrance to some hives in order to let them in and out fast enough, and he had put on some supers, altho no work had been done in them as yet.

His visits suddenly ceast, and I did not see him again for some time, but when I did he informed me that his bees had all died but one colony.

As some may not believe that these reports in the bee-papers, such as I have described, do influence buyers and dealers, I will in my next, among other things, show how they actually do. Southern Minnesota.

The Amalgamation of the Two Unions.

BY WM. MUTH-RASMUSSEN.

You are entirely correct, Mr. Editor, when you, in your foot-note on page 807 (1897), say that I "meant that nobody had recently brought up the amalgamation subject *previous* to the Buffalo convention, in the bee-papers." In my article on page 759 (1897), I used the expression, "as nobody has brought the subject up." If I had had any reference to what was done at the convention, I should have written, "as nobody brought the subject up." I wonder that Mr. Newman failed to see the difference which the word "has" gives to my meaning, and to what he implies.

Since the question of amalgamation was first brought up, Mr. Newman has, it seems to me, shown an entirely unnecessary touchiness on this subject, and he appears to regard all who favor amalgamation as enemies of the National Bee-Keepers' Union. If Mr. Newman should take his son out of a primary school and place him in a graded school for the purpose of a better education; or if he should interest himself in having the primary school elevated into a graded school, would he then regard himself as an enemy of the primary school?

As a matter of fact, I did not know what was done at the Buffalo convention in regard to amalgamation, until I saw (in the Bee Journal received by last mail) the printed report, containing Mr. Newman's communication to the convention, and also his reply to my article on page 759. Mr. Newman uses, unfortunately, in both of those articles, as well as on a number of previous occasions, such offensive language that it must necessarily detract from the respect which otherwise would be accorded him on account of his various official positions and his administrative ability. I admire the spirit of dignity and forbearance with which the convention past by Mr. Newman's communication without comment or discussion.

I do not think that anybody seriously questions Mr. Newman's integrity or honesty of purpose, and his zeal for the welfare of the old Union is certainly commendable. But he should consider that many others are as honest and intelligent as himself. He may be a better lawyer than those who framed the constitution of the new Union, and he may be correct in his criticism of its defects; but he lacks the spirit of progress, which overlooks unimportant technicalities, and, irrespective of old usages, "goes ahead," doing "the greatest good to the greatest number."

I agree with you, Mr. Editor, in the concluding sentence of your foot-note on page 807. If amalgamation is not consummated, the members will gradually leave the old Union and join the new one. But this will mean a gradual decrease in the funds, until there will not be enough left for any practical purpose. In view of this contingency would it not be better, as contemplated, to transfer the funds to the new Union, while they amount to a respectable figure, and keep them up to a certain standard, such as I proposed? Mr. Secor is probably as capable as Mr. Newman to handle the funds to the best advantage, and if they, as I proposed, are only used for defence, and are even, through a large membership, kept up to a certain standard, deemed sufficient for the purpose—while in the old Union they must have been fluctuating—I fail to see what objection anybody can have to the change.

In proposing the sum of $500 as the standard defense fund, I did not mean to restrict the fund to that figure. I simply considered it as the lowest amount that would make a respectable showing. If the directors in their wisdom should deem it advisable to make the standard higher, I, for one, shall raise no objection.

Inyo Co., Calif., Dec. 30, 1897.

No. 3—Recollections of an Old Bee-Keeper.

BY DR. E. GALLUP.

(Continued from page 20.)

My next bee-keeping was in Fond du Lac county, Wis., in a prairie country, and away from the basswood, willows, etc. There was a basswood grove three miles west of me, at Fairwater. As soon as I was settled I began to look around for bees. I found a man west of me that had five colonies in large box-hives, that had never swarmed, and he had never taken any honey from them. By doing an immense amount of talking, I persuaded him to let me have the bees for half the honey and half the increase. I took them home, cut the hives down to about the right size to suit me, and returned him about 150 pounds of honey in a very few days. I kept them two years, got a good start, and returned him 10 colonies, and I do not remember the amount of honey.

In the meantime I had found some wild bees. The first swarm I found when I was hunting for my cows, about three miles from home, and in my shirt sleeves. I had just found the cows, and came across a fair-sized swarm clustered on a bush. I never could think of leaving a swarm of bees, so off came my shirt. I fastened up the neck by tieing up the sleeves, cut off the bush, and put the bees, bush and all into the shirt, gathered up the flaps, carried them home across lots, as the country was new and not fenced. Then we had a season that the bees clustered out and did not swarm or produce any honey.

The following season I heard of a Hollander, by the name of Wellhausen, that made bees swarm at will. He made swarms at 25 cents each. A neighbor had three colonies, and said he was going to get the old "gent" to come and "swarm them" for him. So I made arrangements for the neighbor to be sure and have him come over and make some swarms for me. I also paid the neighbor for a day's work to come over and interpret, as Mr. W. could not talk English intelligently. So I wormed what information I could out of him before he commenced operations. This Mr. W. held out the idea to his neighbors that no one else but he could do what he did, as he possest the power to enchant the bees, etc.

He smoked the bees at the entrance, from his tobacco pipe, then turned the hive bottom up, inverted a half-bushel measure over the mouth of the hive, wrapt a sheet around the hive and measure, so the bees could not get outside, and began rapping on the sides of the hive, and in the meantime kept time with his rapping with a peculiar kind of chant (of course to charm the bees!). After about 20 minutes he untied the sheet, raised up the half-bushel, and behold there was a good, fair-sized swarm of bees in it! He then set it open side out, at about an angle of 45°, set the old hive back on its stand, and began to explain through the interpreter that they were thoroughly enchanted, that he would hive them and set them wherever I wanted them, and they would go to work exactly like a natural swarm.

He then took a long-handled spoon and began poking over the bees, and soon found the queen, or "king," as he called her, and after about 30 minutes he violently shook them up and poured them into a hive, as one would so much wheat. He gradually and slowly turned over the hive, and set it where I wanted it. Of course, I watcht every motion with wide open eyes, and perhaps gaping mouth.

He then commenced on another colony, and in the meantime I had sent one of the children to a near neighbor's and procured another half-bushel, prepared a roll of rags and set fire to one end, and went to work on another colony, and had it done and the queen found before the old gent got through with his, and he was quite angry. He made his old tobacco-blackt teeth snap good at the interpreter. Then turned around to me, and said, "Ghanky man no good. Don't believe in de witches."

Well, I paid his price for making the two colonies, and offered him more, but he refused it with scorn. That lesson made a great advance in my bee-knowledge. He explained through the interpreter how the old colony replaced their queen, etc. He lived in the adjoining township, and I met him at different times. I obtained much important information from his methods, and experimented somewhat with his hives, made in the form of a sugar-loaf, out of willows woven basket fashion and plastered inside and out with green cow-manure, and dried in the sun. He made 108 colonies in two seasons from one, and wintered them successfully on the summer stands. Of course, I might have told you that he drummed out the bees, found the queen, and then hived them, but I am telling you just how I had to learn.

Orange Co., Calif.

[Continued next week.]

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Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

CONVENTION PROCEEDINGS

Report of the Northwestern Bee-Keepers' Convention, Held in Chicago, Nov. 10 and 11, 1897.

REPORTED BY A SPECIAL BEE JOURNAL REPORTER.

(Continued from page 21.)

FIRST DAY—Afternoon Session.

The afternoon session was opened at 1:30 p. m., and Pres. Miller read the following question:

BENEFIT OF DRONES ASIDE FROM MATING.

"What is the benefit of the drone, aside from mating?"

Pres. Miller—How many think that the drone has any other use?

Dr. Besse—I have always been a rather close observer, and I think that drones are of a good deal of use in keeping up the warmth of the hive to the right temperature; and they let that many more workers go out to gather honey. I have noticed that where there are plenty of drones you get more honey frequently than where there are no drones, other things being equal.

Mr. Thompson—It seems to me, if you keep as few drones as possible, that there can't be enough to do much good in the way of warmth. I can't see any use in that direction.

Dr. Besse—I think in certain times of the year it is very well to have a good many drones in the hive.

Mr. Thompson—What time of the year?

Mr. Besse—When they are working, gathering honey, and putting it away.

CONDITIONS DETERMINING THE LIFE OF BEES.

"What conditions determine the life of the honey-bee?"

Mr. Besse—I think they will live longer when there is'nt much to do than they do when they are working hard.

Mr. Whitcomb—If we were to ask the average bee-keeper what the average life of the honey-bee is, he would say about 40 days, and that would be correct, in the main. But my own observation has been that the life of the honey-bee is not gauged by years, months and days. We find in Northern Russia, where honey is produced away up—well, up into Siberia—that the honey-bee must remain in the hive there at least 8 or 9 months—not less than 5 or 6, at the least calculation—and the condition of the life of the honey-bee is gauged entirely by the amount of work that it has done, the stages of life it has past through. If they can be kept from the conditions of work, their age does not count until they have past through them.

Mr. Baxter—I think more bees are killed by accident than by old age; and that is why I believe that in the winter time a bee will live much longer than in the summer time. Take it when they are hard at work, every bee that can be out in the field, etc., the average life is very short—probably 20 or 30 days would be a big average. I do not believe that bees die in the winter time of old age, but that it is from poor wintering, poor packing. They very likely starve to death with their honey in the hive. I have seen that, time and again. And why? Simply because they were not packt properly. The moisture remained in the hive. It condenst, and became a sheet of ice over the comb. They were not examined right away, but after the weather became warm, the sheet of ice thawed away, and the man that found them found five or six pounds of dead bees in the hive, and he jumpt to the conclusion that they died of old age. I am satisfied that is the case nine times out of ten.

Mr. Baxter—In reply to that, I will say that the bees that have worn wings are not the only ones that workt.

USING FULL CELL-DEPTH STARTERS.

"Is it best to use full-length cell-starters, in brood-frames and for comb honey?"

A somewhat rambling discussion ensued as to what was meant by this question, and incidentally there was shown a confusion of understanding as to the terms "Weed process" and "drawn foundation," some insisting that the two terms meant the same thing. Secretary York then explained the difference.

Mr. York—The Weed process applies only to the sheeting of the wax. That is all. And that wax is sheeted the same, whether it is put into a shallow-wall foundation or a deep-wall foundation. The old process, or the new Weed process, is really the process of a year or two ago, and the later foundation is only the drawn foundation or deep-cell foundation. They are both Weed foundation. You might as well drop those terms. It is all Weed process. But the drawn foundation has the deep cells, deeper than the ordinary foundation. That is all the difference.

Mr. Moore explained that he had put in the question, and that drawn foundation was what he referred to.

Mr. Cooley said he would the next day bring in samples of sections of honey built upon drawn foundation, so it was decided to postpone discussion of the question till the samples were present.

USE OF FOUNDATION IN SECTIONS AND FRAMES.

"Is it best to use full sheets of foundation in brood-frames and in sections?"

Mr. Heffron—I would say, from my experience and observation, use full sheets, if they are convenient, but have them fastened so that there is no sagging, and use them only as a center, simply to guide the bees.

Mr. Green—I think we might consider it the universal practice of bee-keepers to use full sheets; and if anybody thinks differently, let us hear arguments against it.

Pres. Miller—I very much doubt whether the majority of bee-keepers use full sheets in sections. How many present use full sheets of foundation in sections? [Ten signified affirmatively.] How many use starters, or less than full sheets, in sections? [Ten signified affirmatively.]

Mr. Stone—I decided to use just little strips, because I had heard so many people say that comb honey was manufactured, and just as soon as they began to find out that the comb foundation was manufactured then they took it for granted that comb honey was manufactured. If they find there is simply a little strip put in the top of the section, or a little in the top and bottom, too, they won't object like they would if there was a full sheet.

Mr. Green—I have used both starters and full sheets, altho for several years I have used nothing but full sheets, because I think under all circumstances I can get more honey, fuller sections of smoother honey, and consequently a larger crop of nicer honey. If you have a small strip in the top the consumer can tell it; if not, nine times out of ten he can't detect it.

Mr. Thompson—The public has been used a good while now to foundation. I don't see how you are going to stop it.

Mr. Baxter—My experience has been that it always pays to have full sheets, invariably, in the brood-chamber. If you use a full sheet the sections when finisht are well sealed all around the edge, in shape, and there is little danger of breaking them; while when you use only starters the bottom very often is not fastened well. As far as the objection by the public is concerned, I think that wouldn't hold good. Either you have to do away with it altogether or you may just as well use full sheets, because you must be able to tell them there is nothing artificial in that section. If you tell them there is just simply a starter you might as well tell them a full sheet. The question of using full sheets, in the quantity of honey produced, and the way it is finisht up, I think will counter-balance all other considerations, even the cost, if it were five times as much as you pay now.

USING UNFINSHT SECTIONS OF PREVIOUS YEAR.

"How many have produced first-class honey in sections that had been partly filled with honey the year before?"

Dr. Besse—I have produced it that way, considerable last year. The great objection is that it gives it too dark a shade—don't get it so white.

Mr. Green—That is not first-class, then.

Dr. Besse—By shaving it down pretty thin, if it is built late in the fall, or partly drawn out, it will make very fair honey, but I have never succeeded in getting first-class honey from the previous year's drawing.

Mr. Green—Sometimes the honey will be inferior because this old comb is hard and dirty, and the bees don't seem to clean it properly. Moreover, this hard comb is worse than the worst foundation you ever saw; and besides this, the honey that is stored in these cells and then taken out just as soon as sold, very often is not properly ripened, and, after standing awhile, that part filled with drawn comb will very often, after it has stood awhile, be very much worse in appearance than the other. The honey will ooze out of it, and if the honey is stored in any moist place it will show in those cells almost every time, and that part of the honey will be decidedly inferior.

Pres. Miller—How many have produced first-class honey under the circumstances stated in the question. [Two answered affirmatively.]

Mr. Heffron—The appearance will be against it.

Mr. Wheeler—I think the trouble comes in when the sections are unfinisht; we are apt to leave them in the fall, and the bees are apt to deposit their glue over the section. It is my impression if the section is taken off just as soon as the bees stop work, and put on when they commence the next season, you can't tell the difference; but I am not certain.

Pres. Miller—That honey left in there becomes candied honey, and that acts as a yeast upon any honey put into that section afterwards. I am inclined to think this: If when the white honey harvest stops you take off every section promptly, and then allow the bees to have full access to those sections, to rob them out, they will make a clean job of it, and those sections will be just as good as if you gave them foundation the next year. I don't say I know that. As to leveling them down, I don't agree with my good friend, the editor of Gleanings, about that. He says it must be leveled down to at least ⅜ of an inch. For the purpose of getting them clean on the edges, that is valuable. If they are clean and good, I don't see any reason why a cell ¾ of an inch deep is not just as good as one ¼ of an inch deep. If it is a good thing to have a cell ¼ of an inch deep, I think it is better to have it three times that deep, providing the cell and the comb are as good.

Mr. Baxter—I will say that I used, this year, foundation for two-pound sections that was cut into sizes for the sections, in 1889, by my wife, and I used them in connection with fresh foundation this summer, and I couldn't see the least difference. I could see some difference on the fastening it in the section, tho. The old foundation was a little harder. It took more heat to get it to stick.

DRONE-COMB IN SECTIONS.

"Have you any objection to drone-comb in the sections?"

Mr. Baxter—No objection at all in the sections, but in the brood-chamber I say I invariably use full sheets of foundation.

Mr. Green—I would object to drone-comb in the sections because honey stored in drone-comb has not nearly so nice an appearance. The consumer may not be able to tell why, but he knows it doesn't look as nice, and he doesn't buy it as readily.

Mr. Thompson—Drone-comb looks very coarse in sections.

Pres. Miller—Did you ever know drone-cells to be kept empty in sections for some time, when the worker-cells in the same section were filled with honey, Mr. Green?

Mr. Green—Yes, sir.

Pres. Miller—That is a serious objection to drone-comb in sections. It will not apply, probably, if there is a large amount of drone-comb in the brood-frames, but we generally limit the amount of drone-comb in the chambers, and you have that condition.

Dr. Besse—I have noticed that.

GETTING UNFINISHT SECTIONS CLEANED OUT.

Pres. Miller—How can we get the sections cleaned out without having the combs torn?

Mr. Thompson—Put them out-doors.

Dr. Besse—I used to do that a good deal, and the bees would clean them out.

Pres. Miller—And they will tear them all to pieces.

Dr. Besse—No, put out enough of them, and put them out late in the evening. If you uncap them thoroughly they will clean them up. I never had the bees tear them down.

Pres. Miller—I have.

Mr. Baxter—Yes, and they will clean every living person off the plantation.

Mr. Baldridge—I would extract the honey from the sections, and put them under instead of over the hive. I would sprinkle them with an atomizer before I did so, and the bees would remove every particle of honey from them.

Mr. Stone—One point has not been toucht upon that has bothered me some. I have taken the sections off the hives, and when the bees were done working, and just taken them off in the cases, and set them in the honey-house; and sometimes in the spring of the year I have kept them just as dry as I could, and as warm as I could, and in the spring of the year I would find that some of those sections that were partly filled, the honey would be sour in them, or a little tainted, and the bees don't like to accept it, and if they do they don't make a good grade of honey. I have got to refusing them entirely, and I don't put in anything except what is fresh foundation, and where they are just partly filled that way I have just extracted them of late years. And the past summer I have tried a little extracting. I would like to know whether it is practicable with any one else. I don't see many objections to it. I take the sections that are partly filled, and cut them out and put them into my wax-extractor, and extract both honey and wax at the same time. You get them both in the same vessel, and the wax is on top, and easily separated from the honey, and you have an article of honey that I don't think has deteriorated at all. I can't see any difference between that and what is extracted with the honey-extractor. As far as the comb foundation is concerned, Mr. Dadant puts little slips of paper between his sheets of wax, saying, "This foundation will not deteriorate in years, or will keep for years, if kept from the sun and dust," or "from the heat and dust." I think that is not a question that needs to be settled.

Dr. Besse—I would say that I never have had any torn sections, and I have had hundreds of them. I save them all and store them, and put them all out that I have, some afternoon—when they have been all extracted that I can extract—and I put that into the bee-cellar—a place where my honey is never sour, but it doesn't dry out. Set them out two or three hours before sundown, and the bees will clean them out as nice as a pin, and never tear a section.

Pres. Miller—Will you tell us how many supers or sections you put out?

Dr. Besse—Perhaps a hundred or two hundred supers.

Pres. Miller—How many colonies of bees?

Dr. Besse—For a hundred colonies.

Pres. Miller—Then you are all right. You have B. Taylor's plan, and that works all right. But if you put out one super that will be a different thing. They will tear it all to pieces.

(To be continued.)

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Hive for Comb Honey and Wintering.

1. I have my bees all in box-hives. Wishing to transfer them into new hives, what is the best hive for comb honey?

2. I winter my bees on the summer stands. Is a 10-frame Danzenbaker hive big enough to winter bees successfully?

NEW YORK.

ANSWERS.—1. It isn't so much the hive as it is the management and the man. The plain, simple Langstroth hive is perhaps as good as any, and I would have it in its latest form, the dovetailed.

2. That depends somewhat on the size of the colony. Possibly it may be large enough for any colony, but I should be full as well satisfied with two stories. The trouble is that with only one story, if there's a big lot of brood late in the season, there may not be room in the hive for all the honey a very strong colony ought to have. But if you make sure that honey enough is present there ought to be no trouble with one story.

Managing Double Brood-Chamber Hives.

See on page 794 (1897) in answering Washington's questions, and also Penn's, you advise using two 8-frame brood-chambers for one hive. I wish you would tell us how you manage your bees. As I understand it, you removed one hive when you put on the supers. How many supers did you put on at the time you removed the hive? and what do you do with the frames in the hive you removed?

You said if you wintered your bees on the summer stands, you would use two stories. Would you put most of the honey in the upper story?

I suppose I ought to tell you how the seasons are here. In the spring the bees get honey from fruit-bloom, vine maple and willow. From the last they get more pollen than honey. We have a good deal of wet weather, sometimes in fruit-bloom, so they don't get very much honey from that. Then about the middle of June or first of July white clover commences, and lasts from four to six weeks. Last summer there was no honey in the white clover to speak of, so the bees did not store any more than enough to winter on. In this part of the country we do not have any fall flow, not enough to keep up breeding, which is the worst feature in keeping bees here. Last winter I lost half of my bees on that account. The white clover stopt all of a sudden and the bees stopt breeding. Those that I lost had plenty of honey, and the others I had to feed came out all right in the spring. That goes to show that we must have plenty of young bees as well as honey to winter well.

WASHINGTON.

ANSWER.—Only one super is put on a hive at first, and the second one is put under it when the first is a third, half or two-thirds filled, depending upon circumstances.

When it comes time to put on supers, there usually isn't a great deal but empty combs in the lower hive, and a pile of empty combs can be left at one end of the apiary till needed, keeping watch that worms don't monopolize them. If a colony has more brood than will go in one story, it is given to a less fortunate neighbor, and if there's an overplus after putting eight frames of brood in each hive, it's piled up on one of the weaker colonies to be drawn from when needed.

Yes, if I wintered two stories outdoors I'd leave the honey mostly in the upper story, just where the bees themselves will probably have left it.

Wintering Bees in a Damp Root-House.

1. Will bees winter safely in a root-house where drops of water hang overhead, altho the hives are perfectly dry?

2. Would it be all right to have a slow fire to dry the water out?

WISCONSIN.

ANSWERS.—Reports have been given of success in such a place, and yours may also be successful. Still, I think I'd just as soon do without having any drops overhead.

2. Yes, providing it does not run the temperature above 45° or 50°, and no light shines from the fire. Of course no smoke must be allowed to get to the bees.

Sound of Bees in the Cellar.

Are the bees all right if I can hear them buzzing every time I go into the cellar?

MINNESOTA.

If you hear the bees you may be sure they're alive, but if they make much noise it's not so good as to have them very quiet. A colony that is wintering in the best condition will be so still that you will have to put your ear close to the hive to hear any noise. By spells, however, it will rouse up for a little time and be more noisy, as if the bees were turning over in bed. When a cellar is full of bees, some say they should be perfectly quiet, but I have never found mine so. If I hear a soft, low murmur on entering the cellar, I feel satisfied. If the thermometer gets down below about 45°, they become more noisy, and they become more noisy if it goes above that. Perhaps in your cellar and with your thermometer, 45° may not be the point of greatest quiet, but if you watch closely you will find some point not far from that at which they are most quiet, and you should try to keep the temperature at that point.

A Winter Bee-Repository.

I have not a very good cellar, in my judgment, for bees, so I have put up a building from rough boards, the outside space of 15 inches filled with sawdust, then another wall of 4-inch boards and paper on both sides, leaving an air space of 2 inches all around, except the floor, which I packt with sawdust 6 or 8 inches next to the ground, then boards and paper, and boards again. The ceiling is made the same as the four walls, except a ventilator 5x6 inches, which is covered by the roof. There are two doors on the south side. Eight inches from the floor I have placed two planks, 2x6, and 4 inches apart, all around the room, where I put the first hives on, about 4 or 5 inches apart, with the bottom-boards off, and then tier up three hives high. Do you think they are all right?

WISCONSIN.

ANSWER.—I don't know. I'm afraid not. The walls are constructed to act as non-conductors, and a very cold spell would have little immediate effect on the bees, for the temperature inside would change very slowly. But you must remember that the temperature will change just as slowly if the outside weather becomes warmer. If the average temperature should keep above 35° or 40°, continuing thus for two or three months, the bees would not feel the occasional spurts of low temperature sending the mercury down below zero. But suppose the average for two or three months should be not more than 10° above zero, then the bees would stay at that mark or a little above it, without any benefit from a chance day with the theremometer up to 50°, which a colony has that stands outdoors. The larger number of colonies in the building the warmer they will be, but there again comes the danger that the air will not be so pure as with a smaller number. You will be doing a service to others if you report next spring how the bees come through. If you find the temperature stands below 40° or 45°, perhaps you could put in a little stove with a fire of hard coal.

Queen Laying in December in Indiana.

Is it a common thing for a queen to lay at this time of the year? I have one that is laying, or at least she was Dec. 20. Along in October I introduced a yellow queen to a black colony of bees, but did not expect any increase so late; but late in November, one fine day, the bees were flying, and I thought I saw a yellow bee go into the hive, so I opened it, and to my surprise there were young bees from eggs up to flying bees. So Dec. 20 the sun came out nice and warm, and I had to have another peep. I lifted out three frames, and they had patches of brood as large as a man's hand, with eggs and larvæ. I thought perhaps it was not a common thing, in a Middle State like this, for bees to breed so late in the season. INDIANA.

ANSWER.—Bees often have eggs in the hive in winter weather, say in February, when the queen begins leaving for the coming season, but your case is very unusual, in December. One reason for it is that there had probably been a cessation of laying before the introduction of the new queen, but even then it was a very unusual occurrence.

Queen that Stopt Laying in August.

I had a young queen in a nucleus, and after she mated and began laying I clipt her wing, using the Monette device. After two weeks I lookt over the hive and found that she stopt laying, as there were no eggs nor brood of any kind.

1. What was the trouble with that queen, that she stopt laying the middle of August?
2. Could the clipping have frightened her so as to stop her laying?
3. Do you think she would lay next season if she is successfully wintered?
4. What would be the best to do with a queen like that? WISCONSIN.

ANSWERS.—1. I don't know. It is just possible that she was all right, but there's hardly one chance in a million that she was, if I am right in supposing that you clipt her within a few days after she began laying, and then two weeks later no eggs nor brood were present. It almost seems, however, that there must be a mistake somewhere, for if there were brood and eggs, or even eggs only in the hive, what became of them in two weeks?

2. I don't think it could.

3. I doubt it.

4. As a matter of curiosity it might be a good thing to keep her for a time to see what she would do, but a queen that would stop laying in the middle of August when she hadn't laid two weeks in her whole life ought not to be encouraged to live.

Wintering Bees in a Barn, and on Candied Honey.

1. I have bees in a barn, with the entrance on the side of the barn, the hives covered with blankets and hay. They have been in the barn all summer, the same I suppose as the bees of your questioner on page 803 (1897), as he says "if bees are in a barn," implying that they were not put there for the purpose of wintering. Now are not these bees in nearly the same condition for wintering that bees are when well packt in chaff hives outside? If not, why not?

1. In September I had some bees short of stores, and I fed them some extracted clover honey. The honey was all right, but now seems to have candied nearly solid. Will the bees be likely to winter on this kind of stores? CONN.

ANSWERS.—1. I am exceedingly obliged to you for calling my attention to that reply on page 803. Those questions on page 803 were answered just after returning from Buffalo (where they should have been answered), and it is evident that in my hurry I lost sight of the fact that there were entrances in the side of the barn. That's not sufficient excuse for such carlessness in answering, I'm only explaining how it happened.

The 40 colonies referred to in the answer were put into the barn and packt there without any entrance at all. With the entrance it's an entirely different thing, and you are right in thinking that they are much the same as being in a chaff hive, the main difference being that more packing is around them.

2. I don't know for sure just how it will be, but perhaps they'll come through all right if they have a sufficient quantity of stores. You will probably find that they will waste a good deal, throwing out the solid grains of candied honey.

Exhibiting Bees in a Store.

There is a store here called "The Bee-Hive," and it is doing a bee-hive business. This summer I let them have my observatory hive to put in their show window. They were well pleased with it, as it attracted a great deal of attention, and secured free advertising in the papers. Now they want to know whether I could put a full hive in the window, and let the bees fly out. I told them I didn't know as such a thing could be done. For I was afraid the bees would buzz themselves to death on the window. I told them the bee-keepers have a Solomon out West that would answer all such questions. If it can be done, please say in what way. NEW YORK.

ANSWER.—Solomon hardly lives in this region, but any bee-keeper who has tried it will tell you that you are right in suspecting that the bees will buzz themselves to death against the windows if they are allowed to come out of the hive in the store. Besides that, they would be very annoying by flying about the store. The best you can do, it will be rather hard on a colony of bees to have one or more sides of the hive covered with glass, but you may be able to have one last through the season by giving it an outside entrance, and by keeping the hive darkened when no one is inspecting the bees. A heavy black curtain might hang over the glass, to be held up while the bees were on view, then dropt down when no one was looking at them. The passage from the hive out through a hole in the wall would have to be boarded up in such way that no bee could get out of the hive into the store, altho having free passage to the open air. It might be easy to accomplish this, and it might not be easy. If the entrance of the hive opened out on the sidewalk it wouldn't do at all. It would have to open out at some part of the building where the bees going out and in would not disturb any passers-by.

Bees Clustering Up Against the Cushion—Markings of Drones.

1. I put my bees into winter quarters Nov. 17, if I remember rightly, and they are all right, but what puzzles me is that they have clustered up against the cushion. They are in one room of the barn, where they were last winter. The cushion is of ground cork in burlap sacks in empty supers. They all cluster the same. Four of the hives are dovetail, one is 15x15, and 18 inches high. The other one is the same except 12 inches high. All have plenty to winter on. What I am afraid of is that it might get cold and remain so, and they starve. Or can they work down to food, as well as up, with breaking cluster? It gets pretty cold in there. I have small sticks to let them pass over the frames.

2. I sent to a queen-dealer in this State for two tested queens. They were of the 3-banded strain. Those queens hatcht nice workers and young queens, but the drones were what I called hybrids. Some of them were almost as black as the old stock, but not as small. IOWA.

ANSWERS.—1. It isn't so very easy to understand just what the situation is. But from what you say I rather understand that there is an open space in some way between the brood-frames and the cushions, and that the bees are clustering in the empty space. Part of the cluster no doubt extends down to the combs and the bees will keep up connection with the base of supplies. But it is not a good thing to have very much space over the brood-combs, and the first day it is warm enough it might be a good plan to crowd the cushions down into the space.

2. If the worker and queen progeny are all right you needn't pay much attention to the drones. They vary very much, and I have yet to see anyone give the marks whereby a pure Italian drone can be determined.

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Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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EUGENE SECOR, Forest City, Iowa.

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EDITORIAL COMMENTS

Order Bee-Supplies in Time.—Yes, you are right, we were about to offer the annual advice regarding the purchase of supplies early—in ample time for the honey season. Judging from the reports we have read from some of the factories, it looks as if there might be an unusually early rush this year. We shouldn't wonder if last season most bee-keepers had a chance to use up all the supplies they had left over from previous poor seasons, and the coming season they will have to lay in another supply. This will make a larger business this year than even that of last year, which was considered almost phenomenal by the manufacturers of apiarian supplies.

The wise bee-keeper will always have on hand, in advance of the season, nearly all the supplies that will likely be needed. Don't get caught without having at least the necessary goods on hand when the time comes to use them.

◆

The New Union's Membership is growing steadily. Almost daily we are receiving and forwarding the dues of new members to the Treasurer and Manager, Hon. Eugene Secor, of Forest City, Iowa. We hope the increase may continue right along, until there shall be a membership of at least 1,000. All who prefer to do so, can send their dues ($1.00) when writing to us, and we will continue to forward them to Mr. Secor, as we are now doing. The membership now must be about 350. Why not make it 1,000 by the next annual meeting, which will doubtless be held in Omaha—or Cincinnati (?). It would mean a good deal if the United States Bee-Keepers' Union had a membership of 1,000. It would then be the largest organization of bee-keepers ever known on this continent. Are *you* a member? If not, you'd better join at once, and lend your aid in carrying out the important objects of the new Union.

◆

The Mich. Apiarian Experiment Station, the Superintendent of which, Mr. John M. Rankin, reports in the American Bee-Keeper, is by no means idle. Among other things they have been at work to increase the length of the tongues of bees, and during the past season made an increase of two-tenths of a millimeter in the length of tongue of one strain by means of crossing. Experiments are also being made in the way of mating queens to desirable drones.

◆

Sweet Clover is both illustrated and clearly described by Harriet Mason, of Lorain Co., Ohio, in the Ohio Farmer of Jan. 6. The writer shows that she knows sweet clover all right, and says, "As a weed it is not troublesome." Of course it is not hard to destroy, if one only knows how. The illustration given is a very fine one, and Ohio farmers would do well to teach their larger stock to eat. The bees know already how good it is as a nectar-yielder.

◆

Honey as Food—our 24-page pamphlet gotten up for general distribution among consumers of honey—is being liberally quoted from by the public press. The Chicago Record—that magnificent daily newspaper—lately printed a half column taken from it. As the Record's circulation is more than 200,000, several people probably learned something about honey. We hope our readers will see to it that the editors of their local papers are invited to copy from "Honey as Food." It's brief, correct, and interesting to all.

◆

The Vermont Bee-Keepers' Convention—the 23rd annual meeting—will be held at the Van Ness House, in Burlington, Jan. 26 and 27. Railroad rate, two cents per mile each way. Of course, every bee-keeper is invited to be present. It will afford a good opportunity to visit the State Experiment Station and Farm. A portion of the printed program reads as follows:

> Comparative Value of the Italian and Black Races of Bees—A. E. Manum.
> Spring Management of Bees—J. E. Crane.
> The Bees and the Flowers—Prof. L. R. Jones.
> Report of Work Done by the Experiment Station Apiary During the Past Year—Cassius R. Peck.
> Would it Be Practical for Vermont Bee-Keepers to Organize a Bee-Keepers' Exchange—J. E. Crane and O. J. Lowrey.
> Song—M. A. Everest.
> Can an Out-Apiary Run for Comb Honey be Made Profitable With No One to Hive Swarms? If So, How to Manage It?—W. G. Larrabee.
> Shall We Adopt the New No-bee-way Section and Fence in Place of Our Present Section and Separator?—H. L. Leonard.
> Recitation—Albert M. Cram.

For a copy of the full program, and further particulars, address the Secretary, H. L. Leonard, Brandon, Vt.

◆

The Chicago Honey Market Again.—Last week we had something to say regarding the prices of honey in this market. Since then the Chicago Record (one of the great dailies here) gave a write-up on the honey-business as it appeared Monday, Jan. 10, on South Water street—the great farm-produce street of this city. Here is what the Record's reporter had to say:

> Honey's lack of activity is material for considerable speculation among South Water street dealers nowadays. This is a season of the year when the product of the bees is

supposed to be in its glory, and to be enjoying all kinds of prosperity. Its comparative sluggishness is attributed by some to bunions, by some to rheumatism, but by most to an inconsiderate, unappreciative people. It is a well-known fact that honey came to Chicago this season with great expectations tuckt away among its comb and other chattels. Upon the passing of the autumn the sweet thing associated very much with buttered toast and other representatives of the bread brigade, but as time wore on a chillness sprung up between them, and now the affiliations are far from brotherly. There is a hope among the dealers that when the next spell of cold weather drifts along, honey will retrieve some of its lost popularity.

Fancy, high-colored white clover honey, tipping the beam at a pound, is sold these days to retailers at a dime a pound, and imperfect off-color stock is markt at a shade less. Buckwheat honey, resembling a Malay in color, lounges around with a 7-cent tag around its neck, and alfalfa stock, from the rolling plains of Colorado, pegs along at 8 cents per pound. Extracted honey, amber to dark, is as slow at a nickel a pound as time is when a night train is being waited for.

In connection with the foregoing there appeared a section of comb honey as a poor, sick man's head, with a crutch under one of his arms, and a bottle of some tonic for "that tired feeling" which he seemed to be enduring just then. Also one of his feet was bound up, and, all in all, the old gentleman, whom they called "W. Clover Honey," appeared to be in pretty bad shape.

We attribute the lack of a general demand for honey here just now, to two causes, viz.: The very warm and unseasonable weather, and the great quantities of adulterated liquid honey (or glucose) being put upon the market by the unscrupulous wholesale grocers. Much of it is unfit for a dog to eat, and when people once get a taste of such stuff, it simply kills their desire for any kind of honey, and they are slow to buy again.

◆

Complete Volumes of 1897.—We have on hand about 40 complete volumes of the American Bee Journal for 1897, which we will mail to any one upon receipt of 60 cents. We also have about the same number of the first six months' copies of 1897, which we will mail for 30 cents. As there were 832 pages of the Bee Journal last year, here is a chance for our new subscribers to get a good deal of valuable reading-matter for a very little money. Better order at once, before they are all gone.

THE WEEKLY BUDGET

Mr. W. L. Coggshall, of New York State, with his two sons, a part of one of his many apiaries, and his elegant home, are all shown in Gleanings for Jan. 1. Everything indicates general prosperity and comfort. Good for W. L.

Mr. J. F. McIntyre, of Ventura Co., Calif., writing us Jan. 3, said:

"We are having a dry year so far. The grass has dried up, and prospects are poor for a honey crop next season."

Dr. G. L. Tinker, of Tuscarawas Co., Ohio—once a prominent apiarian writer, manufacturer, etc.—recently visited the A. I. Root Co., and afterward wrote up his trip, which appears in Gleanings for Jan. 1. It's a deserved boom for the Rootvillians.

The British Bee Journal completed its 25th year with its last issue of 1897. So did Gleanings, we believe, for if we mistake not they both were started in 1873. We congratulate them. The American Bee Journal is just 12 years their senior, having been establisht in 1861. The three bee-papers named are the oldest printed in the English language. There may be older ones in Germany, and there may not. We do not know. In this country the next to Gleanings in age is the Review, which completed its 10th year with 1897.

Mr. Wm. Russell, of Hennepin Co., Minn., writing us Jan. 11, said:

"I congratulate you on the improved appearance of the Bee Journal for 1898. If I could only remember one-half of the good things it contains, I would make fewer mistakes."

Mr. Geo. Spitler, of Crawford Co., Pa., wrote us Dec. 31, 1897, as follows:

"We are now having a week of the first winter weather. We have good sleighing, but the mercury has not gone below 12° above zero. Bees are hibernating (?)."

Mr. W. J. Forehand, of Lowndes Co., Ala., wrote us Jan. 10:

"This is an ideal location for the purpose of queen-rearing, which is almost a constant honey-flow. Bees to-day are bringing in loads of pollen."

Mr. A. I. Root has been spending some of his leisure time lately in defending the Weather Bureau that so many like to poke fun at, and in trying to reform the Agricultural Department which is offering prizes for articles on growing tobacco. Mr. Root, why didn't you offer the Department a bee-smoker, to swear off?

Miss Fannie C. Damon, of Middlesex Co., Mass., lately sent us 25 cents for the Langstroth Monument Fund. If each bee-keeper in the United States and Canada would contribute 25 cents, it would amount to a very nice sum, and purchase and erect a splendid monument to the great Langstroth—the revered Father of American apiculture.

Dr. C. C. Miller, who has for years so ably conducted the bee-department of the excellent National Stockman and Farmer, has begun to write for it some illustrated articles for beginners in bee-keeping, the first appearing in the number for Dec. 30, and is devoted to the queen-bee. The Doctor can do some good work in that line, and he will.

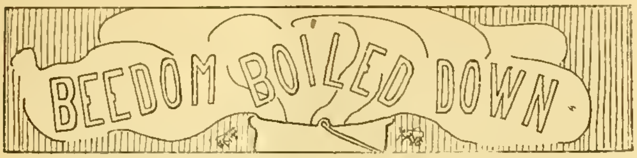
Mr. John G. Knuppel, of Kings Co., N. Y., has kindly sent us a photograph of his city apiary, regarding which he wrote Jan. 11:

"We had a very fine crop of both comb and extracted honey the past season, in all 2,000 pounds, which we sell in our own home. The bees are doing nicely so far."

Mr. Wm. M. Whitney, of Geauga Co., Ohio, gave us a pleasant call Jan. 13. He has 28 colonies of bees, and is making quite a success of the business tho he is quite advanced in years, and began only about two years ago. He is doing what he can to get local bee-keepers to study the subject, and to keep their bees in an up-to-date way. Mr. Whitney will likely be heard from later on.

Mr. C. Theilmann, of Wabasha Co., Minn., called on us last week, when in Chicago with a carload of hogs. He had a very poor season with his bees the past year. He secured only about 1,700 pounds of comb honey, and had to feed over 3,000 pounds of sugar to carry his bees through the present winter. He has never had a final settlement with the crooked Chicago commission firm to whom he shipt his 1896 crop of comb honey, some 12,000 pounds. All he has been able to get so far was about one-fourth of its value.

The Poultry Show of the Year will be held in Chicago Jan. 24-29, under the auspices of the National Fanciers' Association of Chicago. The Borden Building, 214 East Madison street, has been secured for the purpose, and the number of entries promises to be very large. Every preparation is being made for the care and comfort of the poultry and pet stock when in the showroom. Railways and hotels are convenient, and those who visit the show will find the surroundings pleasant, and the exhibits highly entertaining. The Secretary, W. W. Hogle, 1015 Benson Ave, Evanston, Ill. (a Chicago suburb), will be glad to furnish particulars. The railroads are making special rates for those outside of the city who desire to attend.


BEEDOM BOILED DOWN.

The Fence Separator with the no-bee-way section has a stone shied at it in the American Bee-Keeper, and a good word for it in Pacific Bee Journal.

Thin Foundation for Brood-Combs.—The editor of Gleanings thinks thin, but not extra-thin, foundation might be used in the brood-nest in *shallow* frames well wired.

Bees Gnawing Out Bottom Starters.—W. H. Eagerty complains in Gleanings that when late in the season he gave to the bees sections with nearly full sheets and bottom starters, the bees gnawed away the bottom starters and finisht up the combs where the top starters ended.

Triangular Bottom-Bars.—L. L. Skaggs recommends in Southland Queen that bottom-bars be made triangular like the old-fashioned top-bars, the sharp edge or comb-guide being turned up in the bottom-bar. He says they are much stouter than a flat bar of the same weight, and the bees will fasten to them much better.

Bee-Diarrhea is Contagious, as shown by experience. Strengthen with sound bees a colony reduced by diarrhea, and the dying off will steadily continue. Weygandt says the evil is readily communicated from bee to bee if they eat the same food, and especially, as is the case with bees, when the same food is carried from mouth to mouth.—Editor J. B. Kellen in Luxemburg Bztg.

Well-Ripened Honey.—The editor of Gleanings, after describing some honey in such a way as to make one's mouth water, closes up by this sentence, which, by changing "dry room" to "warm dry room" is worth pasting in one's hat: "Any honey, if of good flavor, when allowed to stand in an open vessel in a dry room, will become thick and waxy if given *time* enough."

The Long-Idea Hive.—G. M. Doolittle having spoken against the long-idea hive, O. O. Poppleton comes to its defence in Gleanings. He thinks it probable that Mr. Doolittle never had a properly-constructed hive of that kind, as neither the Gallup nor the Langstroth frame can be profitably used in that manner; only a deep frame that will allow the brood to remain compact.

Castors for Shipping Comb Honey.—The most dangerous part of shipping honey is the rough handling by freight-hands when shifting to or from the car. J. E. Crane explains in Review that he prevents rough usage by putting castors on each under corner of a box containing 15 or 20 cases. No two-wheeled truck is then used. The expense is perhaps ½ cent for each pound of honey.

Hauling Bees at Night.—In Germany it is a common thing to move bees from one place to another, generally at night, in search of better pasturage. The editor of Centralblatt says that in the region of Hannover the law requires that when hives are thus hauled and are open (it isn't easy to close skeps or straw hives), a lighted lantern must be carried 22 yards in advance of the wagon.

Four-Piece Sections have been almost entirely displaced by one-piece sections, but a return to the four-piece for Californians is advocated in Pacific Bee Journal. It is claimed that with glue, or even without it, they are more rigid and perfect than the one-piece, and give a better effect to the honey, and can be made on the Pacific Coast to compare with Eastern manufacturers, counting the difference in freight.

Fastening Foundation in Brood-Frames.—The A. I. Root Co. has adopted as one of its regular productions a top-bar with a kerf in the underside to receive foundation. The kerf is ⅛ inch wide and ¼ inch deep. Parallel to it is another kerf just like it, with a film of wood 1/32 thick between the two kerfs. The sheet of foundation is slipt into one kerf which is in the center of the top-bar, then a wedge-shaped strip the length of the underside of the top-bar is forced into the other kerf, crowding the film of wood hard against the foundation, thus holding it fast. This plan has been in use some years in England, but for some reason has not before been introduced here. A German plan a little like it has been used to some extent here. A single kerf is made in the top-bar, the sheet of foundation is slipt in, then a drop of melted wax here and there from a burning beeswax candle keeps it in place till the bees fasten it.

Empty Comb for Winter Cluster.—While authorities are telling us that bees don't occupy empty cells in winter, and others tell us bees winter best on solid combs of honey, M. A. Wathelet, editor Le Rucher Belge, urges with emphasis that in preparing for winter, care must be taken *not* to take out center combs that contain little honey to replace them with others better filled, thus dividing by full combs the cluster, and thwarting the bees in the effort they have made to arrange themselves in the best manner possible for the severe season. Where does the truth lie?

Austrian Bee-Keeping.—The central society of bee-keepers in Austria numbered 3,667 members for the year 1896, the report for 1896 being given in Bienen-Vater for December, 1897. These members had 23,344 colonies, or a little more than 6 colonies per member. The average per colony was about 9 pounds of honey and ½ pound of beeswax. Not quite two-thirds of the colonies were in movable-comb hives. Of the 15,468 movable-comb hives, only 91 opened on top, as most hives do in this country; 28 of them opened at the side, 439 at the bottom, and 1,243 at the back.

A Machine for Cleaning Sections is described and illustrated in the Review, being the invention of L. A. Aspinwall. It is especially adapted to clean plain sections, altho it might be used with more or less advantage with the old style. A strong frame-work holds something that looks a little like the relic of a thick grindstone that has been worn down to a very small diameter, and the section is applied to this as it revolves, the surface being such as to rapidly remove all traces of propolis and stain. A rapid motion is given to this grinding surface by means of a larger wheel and belt. A treadle for the foot gives motion to the larger wheel.

Temperature of Brood-Nest in Winter.—It is a somewhat troublesome thing to get at the temperature in the middle of a cluster of bees in winter, as explained by G. M. Doolittle in the American Bee-Keeper. After a good deal of experimenting he settled upon the following: When the mercury stands at zero outside, the temperature in the cluster of bees is 64°, and for every 15° of change from this point (outside), the change in the cluster is 1°. Thus 16° below, gave 63°; zero gave 64°; 15° above gave 65°; while 30° above gave 66° in the cluster. He thinks bees must burn a lot of fuel in the shape of honey or some substitute in a time of severe cold, in order to bring the cluster from below zero up to 63°, and raises the question whether those who are recommending out-door wintering may not be making a mistake that costs a good many dollars.

Curing Foul Brood Without Drugs, shaking off the bees, or any loss of their work, can be done by even a novice, says M. M. Baldridge in Bee-Keepers' Review. Cage the queen and put her in the top of the hive where the bees can have access to her. Bore an inch hole in front of the hive a few inches above the entrance, and toward sunset fasten over the hole outside, a metal bee-escape. Let it stand till next morning. Take from any strong, healthy colony one or two combs of brood, with or without adhering bees, put in an empty hive and fill out with frames of foundation or starters. Any time in the forenoon, or when the bees are getting honey from the flowers, place this prepared hive on the stand of the diseased colony, placing the latter close beside it, but turned end for end, handling it very gently, and leaving the entrance open. Within two or three days nearly all the bees will be in the new hive, when toward sunset the queen is to be taken from the old hive after driving the bees away from the cage with a little smoke, and she is then to be run in at the entrance of the new hive. Gently turn the old hive end for end, and close the entrance. No bee can get out of the old hive except through the escape, and no bees can enter, so all will go to the new hive. In about three weeks all healthy brood will be hatcht in the diseased colony, and soon thereafter all the bees will be in the new hive, and no loss of bees or labor. Then dispose of the old hive and contents by burning or otherwise.

☞ See "Bee-Keeper's Guide" offer on page 43.

Only 6 cts. per Pound in 4 Can Lots or Over.

Finest Alfalfa Honey!

IT SELLS ON TASTING.

The Honey that Suits All Who Buy It.

We can furnish **White Alfalfa** Extracted Honey, in 60-pound tin cans, on board cars in Chicago, at these prices: 1 can, in a case, 7 cents per pound; 2 cans in one case, 6½ cents; 4 cans (2 cases) or more, 6 cents. The Cash MUST accompany each order.

☞ A sample of the honey will be mailed to an intending purchaser, for 8 cents, to cover postage, packing, etc. We guarantee purity.

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Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

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They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

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that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

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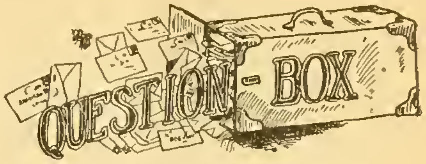

In the multitude of counsellors there is safety.—Prov. 11-14.

Cold and the Secretion of Nectar

Query 67.—Does a light freeze or cold spell just previous to the opening of blossoms seem to prevent the secretion of nectar?—N. C.

E. France—Yes.

Eugene Secor—I believe it does.

Mrs. L. Harrison—I think it does.

J. A. Green—I have not noticed this.

G. M. Doolittle—Not that I ever discovered.

W. G. Larrabee—I think it would be liable to.

Dr. C. C. Miller—I don't know. Hardly think so.

Prof. A. J. Cook—I don't know, but think not.

C. H. Dibbern—I do not know, but I think not.

Chas. Dadant & Son—It surely has a depressing influence.

Dr. J. P. H. Brown—It curtails the secretion very much.

R. L. Taylor—With some kinds of blossoms, but not with all, I think.

Emerson T. Abbott—Not if it does not freeze hard enough to injure the plant.

J. M. Hambaugh—I am not sure on this point. A frost during the bloom I believe to be more injurious.

Jas. A. Stone—I think not, unless it is cold enough to kill the blossoms, providing it is favorable weather after blossoming.

Rev. M. Mahin—I think not. I know that a light freeze sometimes increases the secretion of nectar after the blossoms are out. This is especially true of cherry-bloom.

J. E. Pond—This is a matter to which I have given no attention, but ordinarily I should not suppose it would affect the matter of secretion unless sufficiently severe to destroy the life of the blossom.

Wm. McEvoy—Yes, I believe that it does check it some. In June, 1888, we had a cold rain followed by a hail-storm just as the clover was beginning to bloom, that checkt the flow then. And on the night of May 28, 1889, we had a frost that checkt the honey-flow for a long time afterward.

G. W. Demaree—Not if the flowers are uninjured by frost. The condition of the weather at the time when in bloom has much—all—to do with the secretion of nectar in flowers. I have noticed the rather curious fact that the most favorable conditions for the early honey-flow are often *reverst* in the late (fall) honey-flow.

A. F. Brown—I think not. I remember one year in March, when colonies were gaining two to four pounds per day from orange, when, on the 19th, we had a cold wave, the mercury dropping to 24° two nights in succession; the following days the colonies carried in 8 to 12 pounds each, and kept it up for several days. This cold damaged the bloom just enough to cause it to secrete nectar very heavily. With bright, fair warm, days following a light freeze, I think in case of some flowers the cold is a benefit rather than otherwise.

GENERAL ITEMS

Good Average Per Colony.

I have 21 colonies of bees put away for winter, and 2,000 pounds of comb honey was the season's result last summer.

J. H. LOGEMANN.

Worth Co., Iowa, Dec. 17, 1897.

Bee-Management in Washington.

I notice on page 747 items from Chehalis and Lewis counties, Wash. I would like to know how these writers manage their bees. Perhaps they will let us know. It has been a poor season, my average being 53 pounds per colony, two-thirds comb.

HERMAN AHLERS.

Clatsop, Co., Oreg., Dec. 10, 1897.

Good Honey Season.

The past season was a good one for honey in this locality, altho the crop of white honey was quite short, owing to the cold weather nearly all the month of June. My 134 colonies increast to 155, and gave me 9,000 pounds of honey, about 1,100 pounds of it being comb.

A. W. SMITH.

Sullivan Co., N. Y., Dec. 13, 1897.

Electric Swarm Notifier.

I find the American Bee Journal a great help. My bees had a nice flight yesterday. I notice on page 288 an item by J. H. Williamson, saying he would publish the working of his electric swarm notifier, but he has not done so yet. I for one should very much like to hear from him through the Bee Journal.

B. W. HALL.

Merrimack Co., N. H., Dec. 13, 1897.

Bees Did Well the Past Season.

I put 46 colonies of bees into a shed boarded tight on the north and west, with open front to the south, with some boards tackt up to shade them from the sun. I put on empty supers, and a Hill's device of my own make, and filled them with cushions or blankets, old clothing, etc., and packt behind and between with straw. They will be left as they are now till time to put on sections next season. My bees did well the past season. I sold my honey in the home market at 8⅓ and 10 cents; swarms at $1.25, and colonies this fall at $3.50.

NOAH MILLER.

Johnson Co., Iowa, Dec. 10, 1897.

Results of the Past Season.

The past season has been about an average one for honey. The yield in many localities in this county has been better than for years, owing, I think, more to the condition of the colonies than to the nectar secreted by the flowers. My reason for thinking so is, that last spring I was unable to attend to my bees "at the right time," on account of illness, resulting from my "experience" in Dixie Land, some 30 years ago, and as a result some colonies stored quite a fine lot of honey, while others did nothing. I believe that if all my colonies had been alike strong, I would have had the best yield I ever had.

I cannot agree with my friend from Somerset county, this State, that bee-keeping "don't pay," for our bees have always paid us better (except one year) for labor expended than have our cows, when we sent milk to a cheese factory or made butter at home.

There was less swarming last year than for years, as far as I have heard.

I have sold all my honey in the home market, for 12 cents wholesale for comb honey, and 10 cents for extracted, for white clover.

It doesn't seem possible, but the "Old Reliable" seems to be getting better all the time.

GEO. SPITLER.

Crawford Co., Pa., Dec. 15, 1897.

Bees and the Apple Yield.

We have come to look at the American Bee Journal as a fixture in this household, from oldest to youngest. I have 12 colonies of bees that are on the summer stands, with plenty of stores and a very mild winter so far.

I wish to say to the bee-men that the apple crop was a complete failure in this State, but I have four apple trees that have borne three years in succession. People came here and askt as to the cause; and in fact I was not able to tell the reason until a gentleman from Pennsylvania said it was the blessed bees. Anyway, I got about a dozen barrels of apples, lots of fun, and some honey.

NATHAN A. SLEEPER.

Hillsboro Co., N. H., Dec. 13, 1897.

A Report for 1897.

The first part of the season, in this locality, bees did fairly well, better than an average on fruit-bloom, raspberries and white clover. The honey gathered was very nice.

The last part of the season was unusually good, the best we have had for eight years. Golden-rod yielded abundantly. The honey from it was good, milder in flavor than usual.

The close of the honey season left my bees in good condition for winter. This is the first season for years that I have not had to feed more or less for winter stores.

As usual I reduced the number of my colonies by uniting about one-third. They are now in winter quarters on the summer stands, with outer cases over the hives.

J. P. SMITH.

Sullivan Co., N. H., Dec. 14, 1897.

Not A Good Honey Season.

I have had my bees nearly two years. This has not been a very good season for honey, only receiving about 80 pounds from the strongest colony, while the others did not do much of anything. A year ago last spring I started with two colonies, and now have but 10. I started with five colonies last spring. One colony cast a good prime swarm, and in about six days they cast another heavy swarm; the next day still another, and I lookt through the hive and found four more queens. I took out three queens, so they did not swarm any more, and were in good condition when I put them away for winter.

A. G. TOWERS.

Polk Co., Wis., Dec. 26, 1897.

Bee-Keeping of Ancient Egyptians.

We have before now seen accounts of migrating apiaries. Writers tell us that the season in Upper Egypt is some six weeks earlier than in Lower Egypt along the coast. Maillet tells us the ancient Egyptians were well aware of this. He says there was an abundance of bees and honey in that country, and that it was the custom of that ancient people, each year, about the first of October, to send their hives from all parts of the country into Upper Egypt, where they were placed on boats, numbered and registered. As the waters of the Nile subsided after the inundation, the flora in that hot country came on rapidly. The bees were allowed to remain a few days, until it was thought they had foraged about all they could, when they were moved

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We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
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Alsike Clover........	.70	$1.25	$3.00	$5.75
White Clover...	.80	1.40	3.00	5.00
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Add 25 cents to your order, for cartage, if wanted by freight.

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Is now ready for your orders for QUEENS of either **3 or 5 Banded Italians and Steel Gray Carniolans.** More than 300 Tested Queens to begin with. Untested, either race, 75 cts. each; June and until October 50 cents each. Tested $1.00 each. Good Breeders, $2 each. Straight 5-Banded or "Faultless" Queens, $5.00 each. Satisfaction guaranteed.

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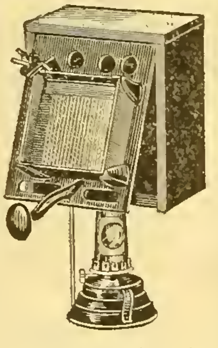

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Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. A. VAN DEUSEN,
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J. M. Jenkins, Wetumpka, Ala.

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REID'S NURSERIES, Bridgeport, Ohio.

THE PROGRESSIVE BEE-KEEPER
Is a 28-page monthly bee-journal publisht at Higginsville, Mo.—price 50 cts. a year. With the year of 1898, we begin the eighth volume, hence it is past the experimental stage. **R. B. Leahy** and **G. M. Doolittle,** editors. Some of the features of 1898 will be a continuation of **"Wayside Fragments,"** by **Somnambulist. "Eperience and Its Lessons,"** by **R. C. Aikin.** This series of articles will be reviewed by Mr. Doolittle, which is practically giving *his* experience with its lessons. "Experience and Its Lessons," as reviewed, will be a gold-mine for beginners and advantageous to those more advanced in bee-culture. The somnambulist articles are written in a pleasing style, as none but "Sommy" could write them. They are highly entertaining and instructive. **Dr. C. C. Miller** and other popular writers also cotribute to its columns. The Progressive is a popular journal at a popular price. Printed in the highest art, on beautiful paper. Fearless in its character, newsy in its contents, and artistic in its make-up. Remember the Progressive Bee-Keeper is but 50c. a year. The Progressive and that "one only" book for beginners, the **Amateur Bee-Keeper,** by **Prof. J. W. Rouse,** both for 65c. A sample copy of the Progressive for your name, and a beautiful, illustrated catalog of apiarian supplies for the asking. Address,
LEAHY MFG. CO., Higginsville, Mo.

This Very Remarkable Social Story,
The thought of which is the application to all life of the test question, "What would Jesus do?" has had an extraordinary sale, even during the "dull times" of summer. In the guise of a dramatic story, the book makes a powerful appeal to the public conscience in the lines in which interest is now so deeply aroused, namely, the social conditions affecting the relations of employer and employe, rich and poor, the Christian and the world, the saloon and the voter, etc. The author believes his test—"What would Jesus do?"—to be nothing less than revolutionary, and applies it with searching directness, not only to commercial and social, but also to religious life. The deep interest which the story has awakened is indicated by the thousands that have been sold, and the many voluntary testimonials, among them being the following:
"The reading of the book will search many a heart, and ought to lead to a simpler, holier, and more fully consecrated Christian life."—Sunday-School Times.
"Singularly impressive....It is a sermon in action, and one that cannot fail to touch the heart."—New York Christian Advocate.
"Mr. Sheldon's book makes a strong impression as a plea for more simplicity of living, for more economy and more principle in the matter of personal expenditure, and for the application of the laws of righteousness and justice to the methods of busi- administration."—New York Independent.

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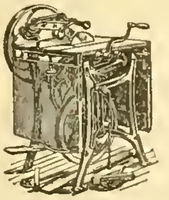

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a few leagues down the stream, and another stop of a few days made, and then another move, until the coast was reacht, about Feb. 1. Thus going, their bees had the advantage of the best bee-pasturage the kingdom afforded, the whole length of the river country.

As to their hives: Hasselquist tells us they were cheaply made of clay, about 4 feet long and half a foot in diameter—curious hives, we would think, but perhaps not more unique or less practical than many receptacles our bees pre-empt in stumps, trees, logs, etc.

I wonder what those postdeluvians would think, could they now take lessons of Doolittle, Miller, Root, and others.

Indeed, I wonder what they'd say
To see bee-keeping in our day;
Methinks they'd open wide their eyes,
To see our hives, frames, and bee-supplies.
Some stories big at home relate,
How bee-men here manipulate
The hives, frames, combs and bees,
And anything just as they please,
And think success is fairly won
As honey comes in by the ton,
While Miller's face would light with smiles,
To think of hiving in new tiles;
They'd think they knew but little of the bee—
But, then, they never had Root's "A B C."

Will Co., Ill., Dec. 13. A. W. Hurt.

Bees in Good Condition.

I have 115 colonies of bees in winter quarters in good condition. In 1897 I got half a crop of honey. E. R. Wright.
Scott Co., Iowa, Jan. 8.

Bees Did Poorly.

Bees did very poorly here this year, altho Alsike was abundant, but there was very little seed in it, making a double loss.
Ontario, Canada. M. G. Williams.

Results of the Season of 1897.

I had 30 colonies the past season, that I workt mostly for extracted honey, and got 3,700 pounds, but no increase in bees.
J. E. Campbell.
Clinton Co., Iowa, Jan. 1.

In Good Condition for Winter.

I had 30 colonies, spring count, increast to 60. I got 1,500 pounds of comb honey from white clover, last season. I got no fall honey. My bees are in good condition for the winter. John N. Michael.
Caldwell Co., Mo., Jan. 1.

Was Successful with Bees.

I was successful with my bees last summer. I harvested about 1,500 pounds of comb and extracted honey. The market here is very low and dull.
Julius Hermann.
Bureau Co., Ill., Dec. 27.

Bees in Good Condition,

I have 5 colonies of Italian bees in the cellar, and in good condition. I am looking forward with great hopes for the next season with them. I love to work with the bees. I can't do without the "Old Reliable." A. G. Freeman.
Neosho Co, Kans., Dec. 29.

Not Enough Flowers for the Bees.

My honey crop actually will not pay the subscription price of the Bee Journal. True, I had only five colonies, but I did expect some little remuneration, for the care that I gave them. This is my third year with bees, and it seems the more experience the less honey, but I think I know what's the matter—too many bees and not enough flowers!

I use full sheets of foundation on wired frames, in good hives (Hilton's) sheltered from the noonday sun, and still no honey. Screw loose somewhere. May be I'll find it after awhile. I have "A B C of Bee-Culture," "Bees and Honey," several copies of the Review, and, last but not least, the American Bee Journal; and if my renewal one year hence is not *in* on *time*, you can attribute it to the fact that it is another of my "off" years again.

L. F. CHURCHILL.
Cheboygan Co., Mich., Dec. 15.

The Bee-Keeper Won.

I would like to let you know how the bee-case or fight came out. I would refer you to pages 494 and 495 (1897) for further details. Well, my neighbor had to return the bees and pay the costs.

AUGUST BACHMANN.
King Co., Wash., Dec. 28.

Not a Good Honey-Flow.

I like the American Bee Journal first-rate, and could not do without it. I started with two colonies of bees four years ago, and have 15 colonies now. I put 11 into the cellar, and 4 on winter stands. The honey-flow was not very good. I got only 460 pounds last fall.

R. H. BERGFELD.
Hardin Co., Iowa, Dec. 30.

Bees Did Well.

Bees did very well here the past season. I harvested 2,500 pounds of comb honey and 500 pounds of extracted of very fine quality, from 48 colonies, spring count, and and increast to 77 colonies, with plenty of honey to winter on. I attribute my success to the American Bee Journal, and could not keep bees without it.

Nemaha Co., Kans. A. W. SWAN.

Stored Honey of Fine Quality.

Bees did well here last season, and the honey stored was of a fine quality. The fall forage was good, tho I expect it was injured and cut short by the drouth of autumn. Bees seem to be wintering quite well so far. Have had but few days at a time of real cold weather here yet, with but little snow, the first coming Dec. 2.

FRED S. THORINGTON.
Livingston Co., Mo., Dec. 16.

Report for the Past Season.

I began the season of 1897 with 60 colonies, and have 80 now. They averaged 25 pounds of honey per colony, mostly comb. The forepart of the season started out grand, but by July 10 the honey-flow broke off all at once, everything dried up, and there was no more honey after that to speak of, altho bees are in good condition. I hope for a better season in 1898.

A. WICHERTS.
Cook Co., Ill., Dec. 17.

Appreciates the Bee Journal.

The American Bee Journal has been a close and constant friend ever since its birth, and I have watcht its development and growth, as it has made its regular visits weekly for so many years, and should it from any cause stop during my life, I should be very lonely without its visits.

My lawsuit is set for the January court. I will report later in regard to it.

H. BESSE, M. D.
Delaware Co., Ohio, Dec. 31.

Hogs Eat Sweet Clover.

The sweet clover seed I got last spring grew all right, and at the present writing it is green. They need not tell me that stock will not eat it, for I cannot keep our pigs off of it, as it is not fenced. We sowed white clover last spring, and if I get the Simpson honey-plant started, don't tell me I will not have any surplus honey.

I think this is a good location. We are near the Republican river, where abound cottonwood, sumac, prickly-ash, box-elder, grape-vines, golden-rod, smart-weed, and any amount of wild flowers that I do not know the names of.

I am very much interested in bees. The Bee Journal is a great help to me. There are so many things a beginner wants to know, and the Bee Journal is the place to find almost any question answered, that you want to ask about bees.

I began last spring with two colonies, increast by natural swarming to six, got 85 pounds of comb honey in one-pound sections, and they all have plenty of winter stores. They have been out for a play-spell at three different dates in this month —Dec. 6, 7 and 8.

I am experimenting a little in wintering my bees; if they winter all right you may hear from me again.

MRS. LIZZIE IRELAND.
Republic Co., Kans., Dec. 15.

Managed a Number of Apiaries.

I have managed alone over 20 small apiaries, starting with 144 colonies, spring count, and increast to over 300, and but 2 swarms. I got 1,371 one-pound sections filled from one divided colony. The Bee Journal has been a great help to me.

THOS. CHANTRY.
Clay Co., S. Dak., Dec. 28.

Bee Journal Likely to Cause Trouble.

I am well pleased with the Bee Journal. It is full of reliable news, and comes regularly, but I am afraid it will cause me trouble, as there is a dispute as to who shall read it first, wife or I, as she has taken great interest in the bee-business.

Los Angeles Co., Calif. J. H. MILLER.

Results of the Poor Season.

I have about 20 colonies of bees that were put into winter in good condition. They produced between 1,000 and 1,100 pounds of comb honey, which sold at 15 cents a pound. About all is sold. I am nearly 66 years old, and have kept bees 19 years. I produce altogether comb honey, and use the Langstroth hive. I have tried many other hives, but for easy handling, and all other purposes, it is ahead of any other I know of. I have taken the Bee Journal about 11 or 12 years, and could not get along without it and keep bees. Bee-keeping here is away back, say 40 years.

ALEXANDER ROSE.
Shelby Co., Ill., Jan. 1.

Selling Honey at Home.

My honey crop has been this year, the summer and fall supply, 600 pounds from seven colonies. The light honey sold readily for 12½ cents, and 10 cents for dark. All pronounced it *fine*. Have sold it all, and there has been a call for more. All was sold in the home market. I have no trouble in selling my honey, as it goes on the market clean and all in good shape. Some *so-called* bee-men will bring their honey to market just as it is taken from the hive, and not being able to get a good

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Box 187 SHEBOYGAN, WIS.
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Bee-Keeper's Guide—see page 43.

price for it, will sell at a reduction. Then the people say, "Well, your honey looks nice, but Mr. So-and-so sells his for much less than you do"—which means at 6 or 7 cents, when, if they had any pride in the good work, they would clean their honey up in good shape, and get as good price as any one. I am very proud of my small apiary, but wish to have more experience.

CHAS. A. BILLINGS.

Wayne Co., N. Y., Dec. 28.

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

New York.—The Ontario County, N. Y., Bee-Keepers' Association will hold its ninth annual convention at Canandaigua, N. Y., Jan. 27 and 28, 1898. An interesting program is in course of preparation. All are invited.

RUTH E. TAYLOR, Sec.

Bellona, N. Y.

The Successful Incubator.—We have before us the new catalogue of the Successful Incubator Co., Des Moines, Iowa. These people have been advertisers in our columns for several years past, and we presume that many of our readers now own and operate the Successful machines. So far as we are able to ascertain, the results of this machine in actual operation are such as to give a hearty endorsement of the same. We see by reference to the annual catalogue that the manufacturers' guarantee is such as to leave very little to be desired. If there is any point of construction, material and actual incubating ability that is not completely covered by the guarantee, we fail to discover it. By the way, this 130-page catalogue is crowded with good things that ought to be in the hands of every man or woman who is interested in poultry in any way. It is a handsome and valuable book, and worth many times more than they ask for it. Send along 6 cts. in postage stamps and secure it before another day passes. It will repay you handsomely. When writing them, please say you saw their advertisement in the American Bee Journal.

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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Ill., Dec. 13.—Fancy white 11 to 12c. No. 1, 10c.; fancy amber, 8 to 9c.; No. 1, 7c.; fancy dark, 7c. Extracted, white, 5 to 6c.; amber, 4 to 5c.; dark, 4c. Beeswax, 26 to 27c.

The demand for comb honey is not satisfactory, and it can be bought at even lower prices than quoted, where it is not in the hands of regular dealers. There seems to be no outside demand. Extracted without special change. Beeswax is scarce.

Milwaukee, Wis., Dec. 13.—Fancy white, 12 to 13c.; No. 1, 11 to 12c.; fancy amber, 9 to 10c.; fancy dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 4½ to 5c. Beeswax, 25 to 27c.

This market has been fairly sustained on honey since our last report. Values remain about the same, as there has been a very good consumptive demand, especially for extracted, while the comb honey has seemed to accumulate with increast receipts, and we feel to meet the demand even if at a reduction from quotations. There seems to be more demand from those who eat honey than in former seasons, which is a good feature of the trade which we desire to encourage. We are expecting a good trade from this forward.

Cleveland, Ohio, Dec. 15.—Fancy white, 12 to 12½c.; No. 1, 11 to 12c.; No. 1 amber, 9 to 10c. Extracted, white, 6 to 7c.; amber, 4 to 5c. Beeswax, 22 to 25c.

New York, N. Y., Dec. 22.—Fancy white 11 to 11½c.; off grades, 9 to 10c.; buckwheat and mixt, 6½ to 7c. Extracted, California white, 5 to 5½c.; light amber, 4½ to 4¾c.; white clover and basswood, 5 to 5¼c.; buckwheat, 4 to 4½c; Southern, 50c. a gallon. Beeswax is in good demand at 25 to 27c.

Our market remains quiet. Fancy grades of white comb are about cleaned up, and these would find sale on arrival at quotations. We have a large stock of buckwheat, mixt, and off grades of white, and, as the demand for these is very light, we cannot encourage further shipments for the near future. Extracted of all kinds is selling fairly well.

Minneapolis, Minn., Dec. 15.—Fancy white, 11 to 12c.; No. 1, 10 to 11c.; fancy amber, 10c.; No. 1, 9½c.; fancy dark 9 to 9½c.; No. 1, 8 to 9c. Extracted, white, 5 to 6c.; amber, 4 to 4¾c.; dark, 4c. Beeswax, 23c.

Market holds firm at above prices. Good demand for extracted. Wax is quiet but firm at 23c.

Kansas City, Mo., Dec. 15.—Fancy white, 10½ to 11c.; No. 1, 10 to 10½c.; fancy amber, 9½ to 10c.; No. 1 9 to 9½c.; fancy dark, 8½ to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

St. Louis, Mo., Dec. 13.—Fancy white, 12 to 12 1-2c.; No. 1, 10 1-2 to 11 1-2c.; fancy amber, 9 1-2 to 10c.; No. 1, 9c.; fancy dark, 8c. Extracted, white, 5 to 5 1-2c.; amber, 4 to 4½c.; dark, 3 1-2 to 4c. Beeswax, 24 1-2 to 25c.

We would advise prompt shipments of honey. We do not see any probabilities of better prices. The stock of honey is ample for the demand.

Albany, N. Y., Dec. 13.—Fancy white, 12 to 13c.; No. 1, 11 to 12c.; fancy amber, 8 to 9c.; No. 1, 8c; fancy dark, 8c.; No. 1, 7½ to 8c. Extracted, white, 5 to 6c.; amber, 4½ to 5c., dark, 4 to 4½c.

There is an ample stock of comb on hand and selling freely at quotations. Extracted is not plentiful and from information received there is not much in the hands of producers.

Buffalo, N. Y., Jan. 14.—Strictly fancy 1-pound comb honey is more active at mostly 10c., occasionally 11c., but all other gradas are dormant and have to be cut to almost any price to move them, ranging from 8c. down to 5c. Extracted is also very dull at 4 to 6c. We cannot recommend the shipping of honey here unless it is strictly fancy 1-pound sections.

There is no selling pressure of consequence on desirable lots of water white, either comb or extracted, such being held as a rule at full quotations. Amber grades are in greater supply than the demand, and market for this class presents an easy tone. Dark qualities are in poor request, despite low asking figures. Beeswax is firm at current quotations, with very little offering, either from first or second hands.

Philadelphia, Pa., Nov. 13.—Fancy white 13 to 14c.; No. 1, 12c.; fancy amber, 10c.; No. 1, 9c.; No. 1 dark, 8c. Extracted, white, 5 to 5½c.; amber, 5c.; dark, 4 to 4½c. Beeswax, 27c.

Honey is arriving very freely; market is a little off. Beeswax is in good demand.

Boston, Mass.; Nov. 8.—Fancy white, in cartons, 13c.; No. 1, 11 to 12c.; fancy amber, 10c. Extracted, white, 6 to 7c.; amber, 5 to 5½c. Beeswax, 28c.

No. 1 and fancy honey has sold well during the past 10 days, but off grades and light weight is going slowly. Beeswax is in good demand and but little here.

Detroit, Mich., Nov. 9.—Fancy white, 11 to 12c.; No. 1, 10 to 11c.; fancy amber, 9 to 10c.; No. 1, 8 to 9c.; fancy dark, 7 to 8c. Extracted, white, 5 to 6c.; amber, 4 to 5c. Beeswax, 25 to 26c.

Indianapolis, Ind., Jan. 15.—Fancy white, 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand.

Cincinnati, Ohio, Jan. 8.—There is no change in prices, but rather a slow demand for all kinds of honey. We quote 10 to 13c. as the range of prices for best white comb honey, and 3 1-2 to 6c., for extracted, according to quality. Beeswax is in fair demand at 20 to 25c. for good to choice yellow. Cincinnati is no place for dark comb honey.

List of Honey and Beeswax Dealers.

Most of whom Quote in this Journal.

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New York, N. Y.
HILDRETH BROS. & SEGELKEN.
120 & 122 W. Broadway.

Kansas City, Mo.
C. C. CLEMOMS & Co., 423 Walnut St.

Buffalo, N. Y.
BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.
CHAS. DADANT & SON.

Cleveland, Ohio.
A. B. WILLIAMS & Co., 80 & 82 Broadway.

Philadelphia, Pa.
WM. A. SELSER, 10 Vine St.
Mr. Selser handles no honey on commission

St. Louis, Mo.
WESTCOTT COM. Co., 213 Market St

Minneapolis, Minn.
S. H. HALL & Co.

Milwaukee, Wis.
A. V. BISHOP & Co.

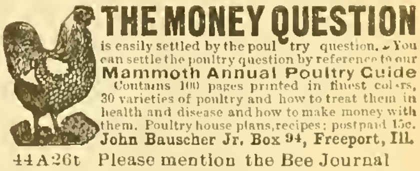
Boston, Mass.
BLAKE, SCOTT & LEE., 57 Chatham Street.

Detroit, Mich.
M. H. HUNT, Bell Branch, Wayne Co., Mich.

Indianapolis, Ind.
WALTER S. POUDER, 162 Massachusetts Ave.

Albany, N. Y.
CHAS. MCCULLOCH & Co., 380 Broadway.

Cincinnati, Ohio.
C. F. MUTH & SON, cor. Freeman & Central Avs.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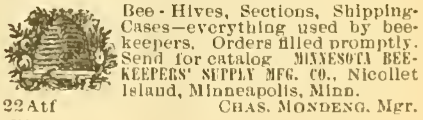
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38th Year. CHICAGO, ILL., JANUARY 27, 1898. No. 4.

CONTRIBUTED ARTICLES

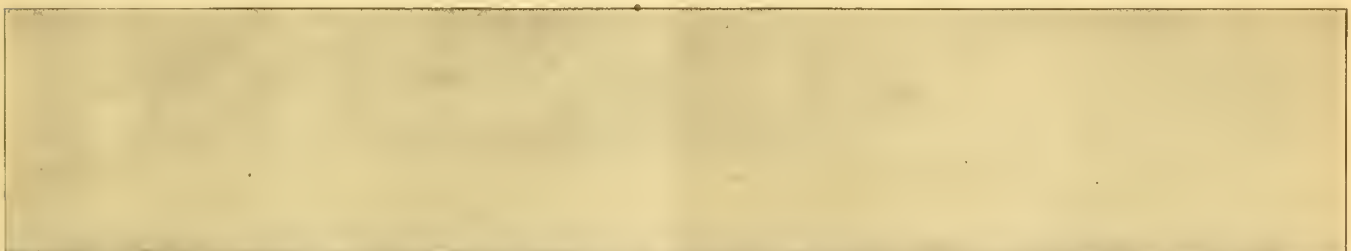
Proper Size of Brood-Chamber—Swarm or Parent Colony for Honey?

BY G. M. DOOLITTLE.

A subscriber to the American Bee Journal wishes me to tell through its columns how many standard Langstroth frames I would use in a hive, when working exclusively for comb honey; and also which will do best at producing comb honey, the prime swarm or the old colony, where but one swarm is allowed from each old colony in the spring. As these are reasonable questions, I will try to answer as best I can.

Regarding the first, I would say that I would use just as many standard Langstroth frames in the brood-chamber, when working for comb honey, as the queen had occupied with brood when the honey harvest commenced in earnest from clover, basswood, or whatever else gave, in my locality, a sufficient flow of nectar so the bees could make a business of storing surplus honey, according as any one honey tree or plant abounded in the locality where I resided. For this reason I would use a 10-frame Langstroth hive; that is, I would use a hive that would hold 10 Langstroth frames, and have it so arranged that I could reduce it to only a four-frame hive, should I find any queen at the commencement of the honey harvest that would not keep more combs than that number occupied with brood; or a five, six, seven, eight, or nine frame hive, just in accord with the prolificness of the queen.

There are a very few queens which will fill 10 Langstroth frame with brood, when they are laying at their best, hence



Official Bird's-Eye View of the Trans-Mississippi and International Exposition, Omaha, Nebr.

we wish a 10-frame hive for these queens; and as we do not know just which will have such a queen year after year, as queens change in prolificness so often, we had better make all our hives to hold 10 frames. Far more of our queens will keep only nine frames filled with brood, and for this reason we wish some way of reducing the 10-frame hive to a 9-frame, when it is required. When the hanging frame is used I know of no better way of doing this than by using an inch board, the same being a little smaller than the inside of the hive below the rabbets, and having a top-bar of a frame nailed to one side of it, so it will hang in the hive the same as a frame.

When we find, at the beginning of the honey harvest, a queen capable of keeping only nine frames filled with brood, and we have 10-frames in the hive, take out the one the queen does not occupy, and slip in the prepared board to take the place of it. But, as a rule, we shall find by far the larger part of our queens will occupy only eight frames with brood, and in this case we will use one of the boards on each side of the hive, instead of both on one side, as this brings the top of the hive in better shape for the bees to work to the best advantage in the sections.

A few of our queens may not come up to this average as to prolificness, consequently we wish to reduce the size of the hive still further in such cases, and for this further reduction I prefer to use two frames spiked together, having ⅜ lumber nailed on each side, thus making what is known as a "dummy." With these boards and dummies we can make the hive so it will suit the prolificness of any queen at the commencement of any honey harvest, and thus secure the best results in comb honey.

If we allow the bees to make a start at storing honey of any amount in the brood-chamber, they will be loth to enter the sections, and instead of doing so they are apt to keep on storing in the brood-chamber, crowding the queen more and more in her brood space, till at the end of the season we will have very little honey in the sections and few bees in the hive for winter. If there is any one thing which tends toward poor success in the production of section honey more than another, I believe the having much empty comb in the brood-chamber at the beginning of the honey harvest is the worst.

Strive to have every queen do her level best at brood-rearing for a month or six weeks before the expected harvest, so that the maximum number of bees shall come with the beginning of the harvest, then take away all comb unoccupied with brood, putting on the sections, and we are as near perfection, according to my views, as we are likely to get; and should the season be a good one, we shall have no cause to complain at the results secured.

But I think I hear some one asking, "Why not kill all the unprolific queens we may happen to have, before the honey harvest?" Should we do this, we shall throw the colony into an abnormal condition which will work against our securing as good results from that colony as we would have secured had we left the poor queen till the end of the harvest and then replaced her. By "abnormal condition," I mean this:

If a young, prolific queen is given near or at the commencement of the honey harvest, she will not be content with the number of combs which the old one occupied, and if confined to these, swarming during the middle of the harvest will be the result, which would blight our prospect for honey of any amount from any colony which gets the swarming-fever at this time; and should we give this queen all the room she needed, say eight or nine frames, it would either result in the crowding her down with honey, as spoken of above, or in their using the most of the honey brought in from the fields in feeding the large quantity of brood she would bring about, which brood would hatch so late that the bees from it would become consumers instead of producers, and thus we would nearly or entirely lose the use of that colony during the season.

In regard to which will produce the most comb honey, the swarm or the parent colony, that depends upon when the swarm issues. If it comes 10 days or more in advance of the harvest, and the old colony is not allowed to swarm again, with proper management the old colony will give the best results. On the other hand, if the swarm comes at the commencement of, or during the harvest, then every advantage should be turned to the account of the swarm, for the old colony would do little more than to secure honey enough for winter under the best of management, while the swarm can be made to give good results by throwing the main force of bees to it.

Onondaga Co., N. Y.

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Every Present Subscriber of the Bee Journal should be an agent for it, and get all others possible to subscribe for it. See offers on page 11.

Ontario Foul Brood Inspector's 1897 Report.

BY WM. M'EVOY.

During 1897 I visited bee-yards in the counties of Welland, Lincoln, Wentworth, Brant, Norfolk, Kent, Huron, Grey, Perth, Oxford, Waterloo, Cardwell, York, Ontario and Simcoe. I examined 66 apiaries, and found foul brood in 34 of them. I found several of the largest and best apiaries in the Province very badly diseased through the bees robbing foul-broody colonies that had been brought from other parts of Ontario, and placed near them. Some of the owners of these fine apiaries had invested from $500 to $800 in bees, one man over $1,000, and to get their good apiaries badly diseased through foul-broody colonies being shipt into their localities, was pretty hard to bear with, but I am satisfied that none of the parties that either bought or sold the diseased colonies that had been shipt knew that they had foul brood at the time of sale.

I also found many colonies very badly diseased through the owners using old combs that they got from parties that had lost all of their bees with foul brood. None of these men knew that the old combs were diseased, or were able to tell the stain-mark of old foul brood on the lower side of the cells. Comb foundation is a very safe and very valuable thing to use, and those that need combs should use plenty of it, and not run any risk by using the old combs from apiaries where all the bees had died.

When going through, examining every colony in a diseased apiary, I markt them according to the condition I found them in, putting one pencil cross on the front of one hive, two crosses on another, and three on all very bad ones. After we get through examining all the colonies, we know the true condition of things by the number of crosses on the front of the hives. Some of the colonies I advised to be doubled the same evening, and the combs made into wax, and when the work was done in the honey season I had considerable increase made from those least diseased, and, as a rule, ended the season with more colonies than I began with, and all in grand condition.

At our annual meeting that was held in London, in 1892, I said that my method of curing diseased apiaries of foul brood would in the near future be followed by the bee-keepers of every land. I am very much pleased to say that my method of treatment is not only followed by the bee-keepers of Canada and the United States, but is "all the go" in far-off Australia, and for this nice state of affairs I thank the editors of all the bee-periodicals. Everywhere that I went the past season to inspect the apiaries, I found every bee-keeper pleased to have me examine his colonies, and for the very nice way that I was treated by every person I return to them my most heartfelt thanks.

I burned two colonies in one apiary, two in another, two in a third place, and a quantity of diseased combs, and three in a fourth locality. The owners helpt to burn some of the diseased colonies, and the other bee-keepers were consenting to have the few worthless colonies burned. I am also pleased with the way all the other bee-keepers took hold, and cured their diseased colonies, that had foul brood in the summer.

While examining their colonies to see if the bees had enough honey for winter, some people found things not right and I found it to be pure foul brood. I explained how to cure it in the most profitable way, and put everything in order.

My time, carefare and livery-hire, was $525.90

Ontario, Canada, Dec. 6, 1897.

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No. 4—Recollections of an Old Bee-Keeper.

BY DR. E. GALLUP.

(Continued from page 36.)

Now I propose to tell of things I learned from Mr. Wellhausen. His queen-cage was a hollow reed, or milkweed, about the size of my little finger. At one end he inserted a common plug, and at the other end he used a long, sharp plug of wood. In one side he cut out a slat nearly 3/16 of an inch wide, and nearly as long as the hollow. This was for the queen and workers to communicate through. When all was ready he would raise or tip up the hive, smoke back the bees, and stick the long, sharp plug right into the comb. For introducing, instead of the lower plug he would insert a piece of comb and honey, and then take a long, fine needle and pierce through the center of this comb, then the bees would cut all out, and liberate the queen on the most approved plan now used, only we use candy.

For a queen-cell protector he used a short piece of reed without the side slit, fit the cell into the top end so the point was only exposed, insert the sharpened plug, and insert the cage among the bees as above, and he had a perfect cell-protector. He used them for hatching-nurseries also. Now, if I am not mistaken Jewell Davis derived or received hints from me that enabled him to get up his queen-nursery; at all events, we corresponded on the subject, and he sent one of his first ones to me.

The old gentleman saved all his natural queen-cells in the above manner, and then his hive being small at the top, a very small quantity of bees would commence right, by giving them a queen or a protected queen-cell. He had his queens fertilized from those small nuclei.

Then to build them up, he would draw out bees from any populous colony, hunt up the queen and return her, sprinkle the bees well with diluted honey, shake them down in front of the nuclei, and the reinforcements would stay where he wanted them to.

Now you can readily see where I obtained my ideas of rapid and safe increase. His hives and all his appliances were primitive, but as effectual as the most approved appliances we have now, with the exception of the movable combs, honey extractor, etc. The fact is, I received my first real insight into successful box-hive bee-keeping from Mr. Wellhausen, even if I did not believe in the witches!

His method, or one of his methods, of introducing queens was to drum out a sufficient quantity of bees, deprive them of their queen, sprinkle with diluted honey, and then liberate a queen among them, either a virgin or fertile one; hive them in an empty hive, and they have been accepted every time. I do not remember ever making a failure by introducing in the above manner. You understand they have neither comb nor brood of any description. Then if sprinkled and completely gorged with sweets, there is every incentive for them to behave themselves, and they do.

By the way, the past summer I reared a fine batch of queen-cells, and made nuclei consisting of two frames of brood and the adhering bees, and inserted eight cells in the West queen-cell protector on the tenth day, and I lost five out of the eight. Too much cool metal about the cell, which caused them to perish. With the milkweed cell-protector I could have saved every one. Our nights here are quite cool. I have lost some, where I introduced them in the center of strong colonies early in the season. I do not say that I lost them by bad handling of the cells, for I DO KNOW how to handle queen-cells.

Bees did remarkably well in the prairie country in Wisconsin in an early day, but before I left all was under cultivation, and the white clover had not gotten into the pastured land sufficiently to produce much, and the golden-rods were killed out pretty effectually, so that bee-keeping was not so profitable except in the vicinity of timber, and especially where the linden was abundant.

About the time I had tried Mr. Wellhausen's methods pretty effectually, I searched the book-stores, both at Fond du Lac and Milwaukee, for bee-literature, and found "Quinby on Bee-Keeping," and that was quite a help. Soon after a Langstroth agent began selling the Langstroth hive and rights, and that disgusted me pretty effectually. Don't fly in a passion, and I will tell you the reason why. He introduced a 7-inch deep, 10-frame hive, and never gave any instructions about cellar-wintering, and the consequence was every colony put into them perish in wintering, and any person of commen sense (as I said) ought to know better. The frame was but a trifle over 6 inches in depth.

When the agent came around to me and began to "explatterate" on the advantage of his hive, I gave him a grand blowing up, and plainly told him that bees could not winter in such a shallow hive, and gave my reasons why. I informed him that the principle was grand, but that he was bumbugging people out of their money and their bees.

Orange Co., Calif.

Use of the "Divider" in Producing Honey.

BY S. T. PETTIT.

Believing it might be interesting to the readers of the American Bee Journal to know of the success the past season of my system of taking comb honey, I send a brief account.

The fact is, the gratifying success attending the new way was simply a marvel to myself. My bees were very strong—they were all that could be desired, with few exceptions, when the flow began; and of course I neglected nothing, everything was done just at the right time and in the right way, according to my judgment, and the work went on nobly, the filling up and finishing satisfactory indeed, the quality and finishing up of the sections so far ahead of anything I could ever get under the old way.

It would be gratifying to me, and profitable to all who try my way, if they would follow instructions carefully. This year I used a large number of dividers with ⅜-inch holes, and they workt all right; no bulging of the combs and no burr-combs. The bees can just walk right through those ⅜-inch holes leisurely and easily, and that is the way they move when building combs. Of course, the holes must be pretty close together—there are 122 in each divider, as I make them now.

Here is a point I must call attention to, that is, if it be necessary to use followers to fill up space, there *must be no passage-ways for the bees outside the followers;* the bees must be kept, and obliged to do their coming, right against the divider.

I have thought a good deal about it, and can hardly tell why I would like to have the space outside the divider, that is, the space between the divider and super wall or follower, if one be used a little more than a quarter inch. Very likely you will say, "Let well enough alone." Good advice, I agree, but for all that I shall test the matter pretty largely, all being well, the next season, with a five-sixteenth inch space.

Ontario, Canada.

Leveling Down Unfinisht Sections.

We received this question some time ago, which we referred to the bee-keepers named for reply, and their answers follow:

MR. EDITOR:—Two or three of the men replying on page 734 (1897) say they would use unfinisht sections with cells full depth, providing they are clean and white, but the others all want them leveled down. According to some there is great advantage in using such sections, the bees being thereby saved time and labor. But I don't want to spoil my sections by using too deep cells. On the other hand, I don't want to lose any advantage by cutting down more than is necessary. Will you kindly ask Messrs. Doolittle and Larrabee to tell us why they would cut the cells down to ½ inch in depth, providing they are white and clean?

It would also help decide what to do if Messrs. Brown, Dibbern, Demaree and McEvoy would tell us why it is necessary to have the cells less than ½ inch in depth.

LEARNER.

MR. M'EVOY'S ANSWER.

I get a finer quality of honey, and more fancy finisht sections.

WM. MCEVOY.

Ontario, Canada.

MR. BROWN'S ANSWER.

In reply to "Learner's" inquiry for more light on Query No. 63, I would say that my experience with cells full depth, or deeper than half inch, gives a somewhat tougher comb of honey; that is, when said combs are kept over from one season to another before being filled. Also, in my limited experience it has seemed that the honey stored in sections having full-depth cells was not as thick and of as nice quality as the same honey in sections that the combs were reduced to ¼ to ⅜ inch in depth, or those built from foundation starters. Partially drawn combs are very good for "bait sections;" that is, to get a start made in the supers; but farther than this I should only class them as of no more value than full sheets of foundation of the weight of about 8 square feet to the pound.

Volusia Co., Fla. A. F. BROWN.

MR. DOOLITTLE'S ANSWER.

As far as I know there is only one reason for the comb-leveler, and that is to get rid of the thick edges to the cells (which generally are of a dingy-colored wax), so that the bees will lengthen out the cells with new wax the next year, thus completing the combs so that they will look equal to those built out entirely new from the foundation. Comb honey sells from looks, and if the old comb which is carried over winter is allowed to remain full-depth cells, then the bees simply fill them with honey and use the heavy rim of old wax to cap the cells with, thus giving the honey a dingy or inferior look. The leveler is used to remedy this, and the less comb that is melted away, only that we may accomplish our purpose, the better. As I use sections whose combs are only 1⅜ thick, it is necessary to level them down to about one inch to accomplish what I wish. If I used 2-inch sections then I should leave the combs after levlling about 1½ inches. I think this will make the matter plain to "Learner."

G. M. DOOLITTLE.

Onondaga Co., N. Y.

MR. LARRABEE'S ANSWER.

I have never had any very great experience with leveled-down combs, but have had quite an experience with unfinisht sections, and I find those that are about an inch in thickness the most desirable.

The thickness of the comb in a 1⅞-inch section with separators (which I always use) is about 1⅜ inches. If the combs are leveled down to one inch, the bees are obliged to thicken the combs ⅜ of an inch, or lengthen out the cells 3/16 on each side; this is enough to cause white wax to be put on the ends of the cells and also capt white. If the combs are soiled in any way the stain will be covered up by the white caps.

I do not think it necessary to cut the cells down any more than just enough to cause the bees to lengthen them a little. If they are cut down more, in my opinion it simply makes unnecessary work for the bees to draw them out again.

If the cells are left full depth after extracting, they will not be capt as smooth nor as white as they would if cut down a little.

I think this explains why I said the combs should be cut down to about one inch. W. G. LARRABEE.

Addison Co., Vt.

MR. DIBBERN'S ANSWER.

Years ago I always used unfinisht sections from one year to another, but invariably in handling over the finisht sections afterwards I could pick out all the sections having contained unfinisht comb, and they were always unsatisfactory. I tried extracting all the honey from such sections, and having the bees clean them up, but the result when again completed by the bees was much the same. The combs would be rough, unsightly, and many combs would bulge off the capping, showing that the honey was souring.

At one time, in my desperation, I advised bee-keepers to extract the honey from all unfinisht sections, cut out and melt up the comb, and make kindling wood of the sections. This policy, however, while overcoming my objections, lookt too much like a wasteful proceeding, and then, too, these sections were so nice for "baits."

Well, finally, I adopted the policy of destroying all sections and combs that were much soiled by propolis, and cleaning up new ones containing white comb, and cutting down the the cells with a thin, sharp knife, to about ¼ inch of the base. This workt very well, and the bees built readily in them, and the finisht comb was nice and smooth, and no tendency to the honey souring appeared. This convinced me that it was in the depth of the cells where the trouble lay.

When Mr. Taylor brought out his comb-leveler I at once adopted it as a much handier and neater operation, and it has proven entirely satisfactory. C. H. DIBBERN.

Rock Island Co., Ill.

MR. DEMAREE'S ANSWER.

The letter of "Learner," relating to the use of sections that have been brought over from the preceding year gives the writer the opportunity to answer the question referred to by "Learner" more fully than could be crowded into the limited space assigned to the "Question-Box" of the American Bee Journal."

In the first place, I use all fairly-preserved sections of the preceding year as a matter of economy. If such sections have been nicely kept over the winter, and properly managed, the quality of the honey will not disappoint the apiarist. Let it be remembered that climatic causes—state of the weather—during the time the honey is being stored by the bees in drawn-out, or partly-drawn combs, has much, if not everything, to do with the quality of the finisht sections. If the state of the weather is in every way favorable—in my locality—fully drawn combs will give first-class honey. But the uncertainty of the condition of the atmosphere in the general way makes it safer to level down the combs with a hot plate, and take no risk.

Some may ask why it is that good, dense honey is taken with the extractor from fully drawn combs. We have only to answer that the conditions are decidedly not the same. In a set of extracting-combs the bees instinctively spread out the honey in the (extracting) combs, and thereby aid in the evaporation of the excess of water in the nectar; while in the section-cases the work is more concentrated, and the drawn-out combs are sometimes filled and sealed before the nectar is thoroughly seasoned. Before I began to thin down the combs, I sometimes in the same season had first-class honey and a poor quality of honey in full-depth combs—notwithstanding only a week or two intervened between the storing of the grades. The conditions of the weather made the difference in the quality of the honey.

It is a fact worthy of notice here, that I have had the quality of honey injured by being stored too profusely in full-sized Langstroth frames when the weather was unpropitious.

When you apply the uncapping-knife to a sealed comb, if the surface of the honey in the cells lies smooth and placid, all is well; but if sparkling, little, beadlike bubbles lie on the surface of the uncapt honey, you had better keep that honey to itself, as slight fermentation is present.

Every well-informed apiarist ought to know his environments best, and shape is course accordingly.

After testing the matter, and finding that in some seasons I can get a good quality of honey by using the brought-out sections just as the bees left them the year before, while in other seasons the quality of the honey is injured by slight fermentation, which produces pressure against the cappings and gives the water color, I now prefer the extra work to avoid all danger of loss, by thinning down the combs to ½ or ¾ inch.

Shelby Co., Ky. G. W. DEMAREE.

⁂

Various Things and a Report for 1897.

BY L. M. WILLIS.

Fifty-two copies of the "Old Reliable" are worth the best dollar made, to any one interested in the pleasing pursuit of sweetness and health-giving products. No, this isn't "taffy," Mr. Editor, but just a plain statement of facts, which, if necessary, I can substantiate. I have been so absorbed of late in the writings of those so much better qualified than myself to tell of their honied experiences, that I came very near forgetting to pay for those droppings of wisdom and information, which have been, and will always be, of interest to me. For altho I have sold out and intend to quit the keeping of bees in this locality, it doesn't matter, I shall want the paper just the same; and were I to take up millinery as a means of livelihood, if only for the pleasure of keeping in touch with the generous hearted and indefatigable old liners and promising recruits who so ably assist you in doing a noble work. And if perchance I should find myself transplanted to the peach orchards of Michigan, or among the orange groves of California, you may be assured of my kindest regard for you and them.

Our honey crop here was cut short by too much rain in the early part of the summer, for altho we had an abundance of clover blossoms, very little white honey was stored in the surplus boxes, and for nearly three weeks the sections were neglected almost entirely after being about half filled. Later we were favored with a flow of yellow honey with which the bees filled and capt the sections; and while this made us feel a little "down in the mouth," we were obliged to admit that it was an improvement upon the previous state of affairs.

Basswood was cut off by a late frost. My surplus amounted to about 1,700 pounds from 31 colonies, spring count, and increast to 50. My best colony filled six 24-pound supers, and eight Langstroth frames above the main hive. Of course they did not swarm.

And now I've a nut for that genial gentleman, Mr. C. P. Dadant, to crack for us. The colony just referred to is one of the first I bought eight years ago. It is in an 8-frame hive. The frames are eight inches in depth, and 17⅝ inches long. The hive contains but seven frames with V-top-bars. This colony has always carried off the honors in honey-producing; some seasons they have cast a swarm, but only one. These swarms do well, but not much better than others I had. The bees are 3-banded, and the most docile of any I had in the yard. The bottom of the hive they are in is nailed fast, so it can only be ventilated by raising the cover. Now, is it the bees or the hive?

I think the past summer was the banner summer for cross bees in this section. I never saw them so utterly depraved before.

Taking my information from careful inquiry, I can report a falling off of about 50 per cent. in the honey crop from that obtained last year, and the most of this is second and third grade goods, tho there is a decided improvement in the manner of preparing it for market.

I was exceedingly pleased with Dr. Miller's report of his grand crop of honey, and it's all right, too; he deserves it, for the Doctor is a real nice man, even if he will tell people that he "don't know" the answer to their questions—when he doesn't. And then just think of all that sugar he fed his bees a couple of years ago for winter stores! His bees hadn't forgotten that.

Clark Co., Wis.

[Mr. Willis desired very much that the above article appear before Jan. 1, but that was quite impossible, we regret to say. We have quite a good deal of valuable correspondence that has had to wait its turn.—EDITOR.]

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Placing Bees Near Line Fence.

How near to the public highway, and how near to another boundary line fence, by the laws of Illinois, can bees be kept? Can one's own bees be followed and hived on another's land?

SUBSCRIBER.

ANSWER.—By referring to the American Bee Journal for Dec. 23, 1897, page 810, you will find an answer to the same questions.

Ants in Hives.

My bees were troubled with ants last summer. They got in under the super between the super and the hive.

WISCONSIN.

ANSWER.—As a rule, ants in the North are not likely to do any material damage. Perhaps their chief object is to secure the heat of the hive for their nests. Bees will not suffer them in the hive, and the easiest way to be rid of them is to have no places to shelter them where a bee cannot also enter.

Wintering in a Bee-House.

Last winter I lost 51 per cent. of my bees. This winter I made a bee-house by digging 3½ feet into the ground and walling it up 4½ feet, and covered it with straw and dirt. I keep some potatoes in it. It does not freeze. It has double doors, and the temperature I keep at 40°. I put the bees in on 2x6 inch scantling edgewise. I have 40 colonies in it, and 9 out-doors in chaff hives. Ought I to take off the bottoms of the hives, or the tops, or both? I put them in about four weeks ago. Do you think my bees are all right?

IOWA.

ANSWER.—It seems that your bees ought to be pretty well off. Possibly 40° is not so well as 45°, but that's not certain, as your thermometer may mark low. The true test is the quietness of the bees. That point of temperature that will come the nearest to making a dead stillness is the best. If you think it would be better to have it warmer, that can be accomplisht by banking up around the walls above ground with earth or straw.

If the tops of the hives are close, and the entrance at the bottom not more than 12x½, you will do well to give more ventilation. The easiest will probably be to have the bottom entirely open and leave the top closed.

Eight Questions with Replies.

1. Should I look inside of my hives to see how the bees are getting along in midwinter? Or should I leave them until spring and take the chances?

2. I have one hive of bees that is without any honey. I gave them sugar syrup. Is there any danger of it drying up so they cannot eat it?

3. Is there any danger of the bees smothering to death if I make the hive top air-tight, with a ⅜x2 inch entrance at the bottom?

4. Will thin foundation do for brood-frames when you have it on hand?

5. Will stiff paper do for separators?

6. Are separators necessary when you use starters or full sheets of foundation?

7. Do bee-keepers use separators when using large frames for extracted honey?

8. Will the bees work as well with the entrance at the side of the frames?

VIRGINIA.

ANSWERS.—1. Probably they'll do better if you let them alone.

2. You probably mean the syrup was fed in the fall. Generally there is no trouble about its granulating in the winter, and yet some cases have been reported where it turned back to sugar in the combs, even after tartaric acid had been used to prevent granulation. But if it was fed early, and not too thick, you hardly need expect any trouble.

3. Yes, there's considerable danger. Better raise the whole hive at the front at least a quarter of an inch, putting a block under each front corner, and then keep a sharp lookout that the entrance doesn't become clogged with dead bees.

4. Not very well. It will stretch and sag too much. By wiring close enough you might make it do.

5. Hardly. Bees would tear it down. Even a very thin wood separator will be gnawed more or less.

6. I fill my sections full of foundation, and it would be hard to hire me to do without separators. If you don't care to ship the honey, then it doesn't matter so much. The sections of honey will eat all right on your own table, if you use no separators.

7. Very few do so, and probably none.

8. Probably there is little difference. In Germany it is quite common to have the entrance at the side of the frames, which is called "the warm system," while the opposite or cold system is mostly used in this country.

One or Two Glasses in a Solar Wax-Extractor.

In making a solar wax-extractor is it better to use two glasses with a space between, in the cover, instead of one glass?

MONTANA.

ANSWER.—Only one glass is used. It is doubtful if a second glass would be any improvement.

A Question About Bee-Stings.

When a bee stings a human being severely, its sting is torn from it, and remains in the flesh of the person stung. Now, when one bee stings another, why is not its sting also torn from it?

MASS.

ANSWER.—I wouldn't like to speak with too much positiveness on this question, but I think usually when one bee stings another the sting is thrust into one of the breathing holes from which it can be withdrawn without being torn from its owner. Occasionally, however, the sting enters one of the joints, and then the sting remains fast as when a person is stung. I think I have in more than one instance seen a bee with a sting sticking in it, the sting having been torn from its owner.

Out-Apiaries, Bee-Houses, Etc.

1. If out-apiaries are kept, how far should they be from the home-apiary?

2. How many colonies do you think likely to return the best results in a single apiary in Northern Illinois?

3 If colonies are kept at home in winter when should they be removed to the out-apiary in the spring, and when returned in the fall?

4. Do you think it would be practicable to keep the colonies of an out-apiary in a bee-house and winter them in it?

5. Those who have reported on the bee-house, have noted bad results from the cool shade on the west side in the forenoon and the east side in the afternoon. Do you think it would be practicable to make a long, narrow house with all the hives facing south?

6. Could 50 or 60 colonies be kept in such a house without confusion, if it were painted in various colors and otherwise markt?

"CHUCKLEHEAD."

ANSWERS.—1. If we accept that bees work to advantage as far as 1½ or 2 miles from home, then an out-apiary should be at least three miles from the home apiary.

2. That's one of the very, very hard questions. I've been trying to get all the light possible upon it for years, and I confess I'm very much in the dark yet, with no brilliant prospect of ever seeing a great light in that direction. One year, where Jones lives, 30 colonies will overstock the locality, while in Smith's locality 150 colonies will not crowd each other. The next year the conditions may be exactly reverst, and the year following each place will be alike overstockt with 50. There being no sort of regularity about it, how are you going to establish any rule? There seems to be a more or less general idea that 100 colonies in an apiary cannot be far out of the way, but likely one reason for that is that 100 is a round number. On the whole I've rather settled down to the opinion

that I don't want to start the season with more than 80 colonies in each apiary in northern Illinois. Six hundred colonies have been kept in one apiary in California all right, but it may yet be an open question whether in a series of 10 years 300 colonies might not give better results than 600 in that same place.

3. After being taken out of winter quarters they can't be moved any too soon to the locality they are to occupy for the season. As a rule, very early pasturage is none too plenty, and by moving part of your bees you are practically increasing the pasturage both of the ones moved and of the ones left at home. The later they are brought home in the fall the better, *provided* they have a good flight after moving and before putting in the cellar. Perhaps the safe thing is to haul them home not later than the middle of October. After that time there is little chance for gathering, and if left much later they may lose their chance for a flight. Still, most years they're safe for a flight as much as a month later.

4. Some report success at it.

5. Certainly, only it would cost more. But some report just as good success with hives facing some other direction.

6. Probably there need be little trouble in that direction, but I'd put more confidence in some other things than color, altho I think color helps. When you decide you will make something of the kind, ask further about it, and I'll be glad to give what help I can toward having colonies mark the right places.

Drones from Queen and Laying Worker.

Are drones reared from drone-eggs laid by a queen in drone-cells the same size as drones from eggs laid by a laying worker in worker-cells? IOWA.

ANSWER.—A drone reared in a work-cell is smaller than one reared in a drone-cell, no matter whether the egg is laid by a worker or a queen. The reason seems to be that there is not room enough for a drone to grow to his full size in so small a cradle.

Sweet Clover—Sowing and Growing It.

Would it be best to sow sweet clover along with oats in the spring, or wait until the oats are harvested? How much seed to the acre? Will it grow from the root like other clover, or will it kill it to cut it for hay? IOWA.

ANSWER.—Sow in spring, using rather less seed than you would of red clover. Better cover the seed deep, and let the soil be well packt. If you sow shallow, and the ground is loose, it may heave in the winter and every plant be killed. Remember it lives over only one winter, not blooming till the second year, after which it dies root and branch. You are not likely to hurt it by cutting first year, but some report that they have killed it the second year by cutting too low and then having a dry spell follow. Of course, cutting it late the second year can make no difference, for it will die the second winter anyhow.

Higher or Lower Elevation for an Apiary.

Does an apiary located on quite an elevation have as good a chance to secure a crop of honey as one that is located on rather low ground, with nearly all the pasturage on higher ground than the apiary? Mine is located upon quite a high hill, and nearly all the nectar has to be carried uphill, some of it for two or three miles. It seems to me that I have to pay more attention to keeping up the strength of my colonies to get the same amount of honey that I would get on lower ground, as they seem to wear out faster. Would it be a good plan to remove them to lower gound? I get as much honey per colony as any one in this section of the State. How much difference is there per colony with the same management between the two localities with about the same amount of forage? MAINE.

ANSWER.—Your question is an interesting one, and in some cases an important one. Without an experimental knowledge on the subject, I should suppose that the matter of elevation must be a decided factor. Of course, comparing an elevated site with a lower one, if the pasturage is poor for a mile about the lower one, and good in the other case, it is not hard to decide that the elevated site should be the better, but no doubt your desire is to know the comparative merits of the two places, supposing the pasturage is the same. Unless there is some factor in the problem that I don't see, it is simply a question as to the difference made by lifting the loads of nectar to a point so many feet higher. I doubt whether any definite answer can be given to your question farther than to say that there will be a difference in favor of the lower site. For I think it must be that the extra labor involved in carrying a load up a greater height must allow a bee to carry fewer loads in the course of its life.

Now there's very little satisfaction in an answer of that kind, but you see there's very little in the way of data to base a fuller answer. For nothing is said about the difference in elevation. A difference of a foot in elevation would probably make no appreciable difference in results, while a difference of half a mile might make all the difference between failure and success.

Even if exact figures were given as to difference in elevation, I don't know enough to say what difference there would be in results, and will gladly yield the floor to any one who can throw light upon the subject. Until you do know more about it, if it is at your option to choose between the two sites, why not divide your bees between the two places, and then you could have a better chance to know what was best for you? Of course it would not fully decide the question you ask, for you must remember there may be local differences that do not appear on the surface, making one site better or worse than the other, regardless of the matter of elevation. But the important question with you is to know which place would give you best results, and that you would have some chance of learning by keeping bees in the two places at the same time.

After you've considered all other points, don't forget that as you already get as much honey as others in your section, it may not be wise to be in too much of a hurry as to making a change.

Why Do Absconding Swarms Fly West?

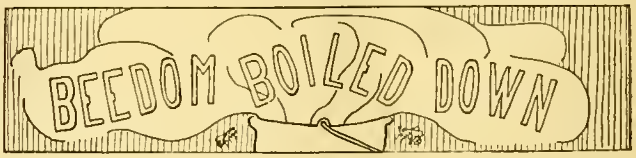
In my locality absconding swarms nearly always go west. It is a very rare thing to see them do otherwise. I wish to know why they do so. W. VA.

ANSWER.—I don't know why it is, unless it results from the persistent repetition of Horace Greeley's advice. Possibly timber to the west of you may be nearer or more suitable. And yet it seems to me that others have reported that swarms almost invariably went west where there seemed no reason for it in the surroundings. I give it up, and leave the question open for any one who has the right answer.

Alfalfa—How to Grow It?

I see much said about alfalfa clover as a bee-plant. When and how should it be sown? Should it be sown with some other grain or grass? How much seed to the acre should be sown? TENNESSEE.

ANSWER.—In its favorite haunts in the West, alfalfa is one of the finest honey-plants, but in other places, even if success is obtained in getting it to grow, I don't remember seeing any reports that bees paid much attention to it. So it will be well for you to attempt it on only a small scale until you see whether it will be worth while. Give it the same treatment as to sowing that is successful with red clover in your vicinity. The hardest part is to get it through the first year.



Korean Bee-Keepers, says L. Lionville in L'Apiculteur, call the queen the "king," or rather the "general," and the drones "females" or else "soldiers." They don't harvest the honey till the last of November, as they say it won't keep.

Hornets and Wasps.—W. F. Reid, in the British Bee Journal, says he has been making a careful study of hornets, and has come to the conclusion that instead of being an enemy to bee-keepers they should be considered as a friend and cherisht accordingly. Several hundred hornets were caught and their prey examined, and in only a single case was a bee found to be the victim. Toward the close of the season at least 80 per cent. of their victims were wasps which are generally considered in England as deadly foes of bees. And now comes "The Bee-Master" to say a good word for the wasps. It says if people only knew the benefit wasps are, they would never kill one; that a good wasp-year is a good honey-year, and that wasps do more than bees to help the fruit crop.

The Plain Section, says F. A. Gemmill in Gleanings, needs very careful handling on the part of the retailer, so as not to stick his clumsy fingers into the surface of the comb when removing sections from the shipping-crate, causing them to bleed, etc.

The French Section.—While there is some talk in this country of a section higher than 4¼ inches, Revue Internationale mentions the "French section" advocated by it some years ago, measuring 5⅛x4⅛x2, and weighing when filled a little more than a pound.

Spoiling the Market.—E. T. Abbott thinks it isn't the farmer with his poor honey and low prices—rather the poor honey helps to sell the better by its contrast—but the mixer with his adulterated goods put up in attractive form, and the producer who ships to a glutted city market and then cuts the price.—Gleanings.

The Capacity of Brood-Chamber, says abbe J. B Voirnot in L'Apiculteur, should be in a box-hive 40 liters (2,439 cu. in.), and in a frame hive 50 liters (3,049 cu. in.). Quinby, in his day, put the capacity of a box-hive at 2,000 inches. A hive with 11 Langstroth frames would be about Voirnot's standard for a movable-comb hive.

Foul Brood Finishes an Apiary in 3 Years from the time it is first introduced if left entirely to itself, according to the experience of R. C. Aikin. He tells of a well-read bee-keeper in whose apiary he lately found foul brood that had been present, he thought, for two years. He allowed his bees to swarm, and never opened a brood-chamber. A case of too little handling of bees.—Gleanings, page 8.

Honey-Vinegar.—Lefebvre-Duchange relates in L'Apiculteur that after extracting he soakt the extracted combs 24 hours in a tub of water, then upon extracting them got a dilution of honey of 6 ounces to a quart of water. One who had no other use for his time might find this a good way to make vinegar. In rare cases it might be a good plan to clean the combs in this way where not convenient to have the bees do it.

Tin Packages for Honey Safe.—Some discussion has occurred in the British Bee Journal as to whether tin packages would damage honey. Otto Henner, President of the Society of Analysts, examined a large variety of articles put up in tin. Very acid fruits corrode the tin; in animal foods (sardines, salmon, etc.) only a trace of tin was to be found, and only the slightest trace in honey. He considers it very foolish to arouse any fears in this regard.

Rearing Queens.—"If the 'South African Deacon,' as Mr. Edwin Bevins calls him, will fill a 10-frame hive with combs of brood, place it over a prosperous colony with an excluder between, and 11 days later remove all cells in the upper story and shake all bees from the bottom body into it, placing the latter with queen elsewhere, he will have bees in the right condition to accept, start or build cells, and the brood or prepared cups should be given as soon as the bees show the queenless sign."—W. H. Pridgen, in Southland Queen.

Three Side-Cut Sections.—In the British Bee Journal there seems to be much discussion with regard to sections split in two on top and two sides, some controversy as to the invention, and mention of a patent. The section is folded and lockt, then pulled apart sufficiently to admit the foundation, after which the parts are tightly prest together, and the foundation holds them together. Simmins' plan is to have a sheet of foundation long enough to fill three or four sections, and after the sections are put together the foundation is cut apart. Sladen's V-slit section has, as its name implies, a V groove running lengthwise, cutting nearly or quite through the section, the V groove being the same as the familiar one cut crosswise in the one-piece sections. These sections have been used more or less for more than ten years in England, but have not seemed to waken very general interest until lately. Possibly one reason for the interest in this matter in England, and the lack of interest in this country, is the fact that little is known comparatively in England of the different machines, Parker, Daisy, etc., for putting foundation in sections. In that excellent work by Mr. Cowan, the "British Bee-Keepers' Guide-Book," even as late as the 1896 edition, no mention is made of any of these foundation fasteners. An Englishman would probably ask whether Americans knew nothing of other ways of fastening foundation that they should use the machines they do, and an American would wonder how Englishmen can putter as they do and not adopt a heated-plane fastener.

Temperature for Brood-Rearing.—In a normal colony, with brood-rearing going on, Doolittle says 92° is the lowest he found in the brood-nest when the air was down to freezing outside. When the mercury stood at 90° in the shade, the brood-nest was 94°, and it never went above 98° in the brood-nest, even when it was a little higher than that outside. So he concludes the bees have the ability to raise or lower the temperature, keeping it from 92° to 98°. And it seems they have the ability to raise Doolittle's temperature tremendously, for after working with bees nearly 30 years, as he relates in American Bee Keeper, his bee-fever is now at white heat.

The Winter Consumption of two colonies in a twin hive with partitions, according to Devauchelle, in L'Apiculteur, is 6½ to 7 kilograms (about 14 to 15 pounds), while a single colony consumes 5 to 6 kilograms (11 to 13 pounds). That agrees with the generally received opinion that a strong colony consumes less according to its weight than a weak one. According to Devauchelle's figures, a colony twice as large as one that consumes 12 pounds, instead of consuming 100 per cent. more, will consume only about 23 per cent. more. Hence economy of stores in uniting two weak colonies in the fall rather than to wait till spring.

Bright Yellow Beeswax is secured by the following method, says Edward Ochsner in the Review:

"The material for such wax comes only from white comb, cappings and burr-combs, and these are always kept separate from the old, dark brood-combs. To render the wax I heat a boiler half full of water, then put in the cappings and burr-combs until the boiler is ¾ full, and keep a slow fire until all the wax is dissolved, when the boiler is set off. Just before the wax is too cool it is dipt off, care being taken to get no water, and strained through cheese-cloth into tin or earthen vessels that have been moistened with honey or water."

Prevention of Swarming,—G. M. Doolittle gives in Gleanings a plan that he thinks well worthy of trial, as in a single season's experience the plan has proved entirely successful with him. First, as many queen-cages as necessary, 4x⅞x½ made of wire-cloth with a wooden plug ½ inch long in each end, tacking fast the plug at one end. When swarming-time comes, say a week or ten days before honey harvest, cage the queen and lay the cage on top of a bottom-bar four or five inches from the entrance, cutting away enough comb, if necessary, for that purpose. Wait 9, 10, or 11 days, at your convenience, then make sure to destroy *all* queen-cells, remove the stopper from the queen-cage and replace it with a stopper two inches long having a ⅜ hole bored lengthwise filled with fresh queen-candy. That's all you do. The bees do the rest, and will not swarm unless the honey-flow continues more than four weeks.

The Plain Section, which is the better name (certainly the plainer name) for the no-bee-way section, is one of the things L. A. Aspinwall has been working with for some time, as he relates in the Review. Instead of the fence separator, he uses a tin separator with openings cut so as to allow ready passage from one section to another throughout the entire length of the upright pieces or sides of the sections.

He uses a super of peculiar construction, a sort of knock-down affair, that is held together by rods or bolts with screw and nut, allowing expansion, so that 20 sections may be used in a super, and as easily 24, 28, 32 or 36.

The plain sections, he claims, cost about 20 per cent. less than the old style. They look better, and will bring a better price, especially as the consumer buys 1/9 less wood in the plain than in the old-style section. A saving of 20 per cent. is made in shipping-cases. The plain section admits of being cleaned by machinery.

Mr. Aspinwall is especially enthusiastic as to the beauty of the finisht product as secured with his supers and separators, his honey bringing the highest price in spite of the ruinous prices at which honey is sold right beside it by farmer bee-keepers.

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United States Bee-Keepers' Union.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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EUGENE SECOR, Forest City, Iowa.

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EDITORIAL COMMENTS

The Langstroth Monument Fund.—It has been a long time since we have had much to say in regard to this undertaing in honor of the lamented Langstroth. But Editor E. R. Root (who has had some correspondence with Mrs. Anna L. Cowan, the daughter of Father Langstroth) suggests that boe-keepers *at once* raise the fund to at least $75. He reports that in all, so far, $60 has been contributed. If we mistake not, nearly half of that amount came from bee-keepers in foreign lands. Now we think that at least a total of $100 should be raised, and that it can be done before March 1, if each bee-keeper at all interested will send in his contribution during February. Why not do it?

Send to us, if you prefer, what you feel like giving, and we will report it in these columns; also on March 1 we will forward all in our hands to Editor Root, who will put it in with what he has received, and forward all to Mrs. Cowan, to be used in the purchase and erection of a monument which shall serve to mark the resting place of the body of Rev. L. L. Langstroth—the bee-keepers' loving friend and greatest benefactor.

Now let the contributions come in lively from this time until March 1. Don't delay because you can't give largely. Give just what you feel you can.

◆

Trans-Mississippi Exposition Notes.—On the first page of this number we show a fine view of the Trans-Mississippi and International Exposition as it will appear when it opens, June 1, 1898. It is through the kindness of the Department of Publicity and Promotion that we have the illustration to show to our readers. Mr. Edward Rosewater, editor of the Omaha Bee, is the chief of that department.

The Bureau of Bee-Industries is in the good hands of Hon. E. Whitcomb, of Friend, Nebr.—the tireless worker in behalf of American beedom. He suggests that bee-keepers and supply dealers who contemplate taking space in his department should not forget the advertising facilities offered them through making displays in that section of the great Exposition. In addition to the space accorded exhibitors, the Exposition will furnish each exhibitor ordinary light, ordinary guards, 20 words each in 100,000 official catalogs free of charge, and all expense pertaining to the jury of awards. These items alone will cover every cent received by the management for space received by exhibitors.

Rev. Emerson T. Abbott, of Missouri, a State Commissioner, has been appointed on the committee of his commission on horticulture, etc. We may reasonably expect some good displays from that State.

Mr. R. C. Aikin, President, and Secretary F. Rauchfuss, of the Colorado State Bee-Keepers' Association, are making a determined effort to have that State properly represented in the Bureau of Bee-Industries.

Mr. Pollock, Secretary of the Wisconsin Commission, visited Omaha the second week of this month, so we will likely hear from Wisconsin in the near future.

◆

Wisconsin Convention.—The 14th annual meeting of the Wisconsin State Bee-Keepers' Association will be held Feb. 2 and 3, 1898, in the Dairy and Food Rooms of the Capitol Building at Madison. Many prominent bee-keepers have promist to be present, and also with a grand display of bee-supplies. Important subjects pertaining to present methods of bee-keeping and marketing of honey will be discust; also as to what shall be done to make the Wisconsin honey display a credit to that State at the International Exposition to be held in Omaha from June 1 to Nov. 1, 1898. The State Bee-Inspector's report, and the free for all question-box with answers and discussions will pay any Wisconsin bee-keeper to attend and take part. All are invited to attend, of course. Mr. N. E. France, of Platteville, Wis., is the Secretary. Address him for further particulars if desired.

◆

California Favors Amalgamation.—We learn that at the recent annual meeting of the California State Bee-Keepers' Association, held Jan. 10 and 11, the subject of the old and the new Bee-Keepers' Union was taken up for discussion, and the result was the passage of the following resolutions, there being 43 votes in favor, and no opposition:

Resolved, That the new Union should absorb the old.
Resolved, That the Secretary be instructed to inform the respective managers of the Unions of this action.

We think that extended comment on the foregoing is hardly necessary, as it is so evidently wise an action that it must commend itself to bee-keepers of all sections of the country. And coming from California, where is located such a large proportion of the membership of the old Union, it seems to us it can scarcely fail to have great weight in bringing about a speedy uniting of the two Unions. We trust it may, and that thereafter there may be a bending of every energy on the part of all to build up an organization that shall do even grander work than has the old Union, if that be possible.

◆

The New Union's Amended Constitution.—In the Bee Journal for Oct. 14, 1897, page 649, we printed six amendments that were approved by the Buffalo convention, and which were submitted to a vote of the membership of the New Union in December—last month. We are informed by General Manager Secor that there were 108 votes cast on the amendments, and as the highest number of unfavorable votes cast on any one of the six amendments was only 8, all were practically carried unanimously.

That our readers may see just what the United States Bee-Keepers' Union stands for, and upon what plan it is organized, we follow this paragraph with the Constitution as amended, trusting it may now meet with such favor at the hands of bee-keepers everywhere that they will rally to its loyal support, and thus generally unite in an attempt to carry out all its objects—every one of which is in the interest of bee-keepers everywhere:

Constitution of the United States Bee-Keepers' Union.

ARTICLE I.—NAME.

This organization shall be known as the United States Bee-Keepers' Union.

ARTICLE II.—OBJECTS.

Its objects shall be to promote and protect the interests of its members; to defend them in their lawful rights; to enforce laws against the adulteration of honey; to prosecute dishonest honey commission-men; and to advance the pursuit of bee-culture in general.

ARTICLE III.—MEMBERSHIP.

SEC. 1.—Any person who is in accord with the purpose and aim of this Union, and will work in harmony with the same, may become a member by the payment of one dollar annually to the General Manager or Secretary; and said membership shall expire at the end of one year from the time of said payment, except as provided in Section 8 of Article VI of this Constitution.

ARTICLE IV.—OFFICERS.

SEC. 1.—The officers of this Union shall be a President, a Vice-President, a Secretary and a Board of Directors which shall consist of a General Manager and six Directors, whose term of office shall be for three years, or until their successors are elected and qualified, except that the term of office of the two Directors having received the smallest number of votes at the time of voting for Directors in December, 1897, shall expire Dec. 31, 1898; and the term of office of the two Directors having received the largest number of votes at the said time of voting shall expire Dec. 31, 1899; and that the term of office of the two Directors having received the largest number of votes at the said time of voting shall expire Dec. 31, 1900.

SEC. 2.—The Board of Directors shall choose their own chairman.

ARTICLE V.—ELECTION OF OFFICERS.

SEC. 1.—The President, Vice-President, and Secretary shall be elected by ballot by a majority of the members present at each annual meeting of the Union, and shall constitute the Executive Committee.

SEC. 2.—The General Manager and the Board of Directors to succeed the two whose term of office expires each year, shall be elected by ballot during the month of December of each year by a majority vote of the members voting; and the Board of Directors shall prescribe how all votes of the members shall be taken.

ARTICLE VI.—DUTIES OF OFFICERS.

SEC. 1.—*President*—It shall be the duty of the President to preside at the annual meeting of the Union; and to perform such other duties as may devolve upon the presiding officer.

SEC. 2.—*Vice-President*—In the absence of the President the Vice-President shall perform the duties of President.

SEC. 3.—*Secretary*—It shall be the duty of the Secretary to keep a record of the proceedings of the annual meeting; to receive membership fees; to furnish the General Manager with the names and postoffice address of those who become members whenever requested of him; to make a report at the annual meeting of the Union, and, whenever requested to do so by the Board of Directors, of all moneys received and paid out by him since the last annual meeting; to pay to the Treasurer of the Union all moneys left in his hands after paying the expenses of the annual meeting; and to perform such other duties as may be required of him by the Union; and he shall receive such sum for his services, not exceeding $25, as may be granted by the Board of Directors.

SEC. 4.—*General Manager*—The General Manager shall be Secretary of the Board of Directors, and shall keep a list of the names of members with their postoffice address; receive membership fees, and be Treasurer of this Union. He shall give a bond in such amount, and with such conditions, as may be required and approved by the Board of Directors, for the faithful performance of his duties, and perform such other services as may be required of him by the Board of Directors, or by this Constitution.

SEC. 5.—At the time of sending the ballots to the members for the annual election, he shall also send to each member a list of the names of all members, and an itemized statement of all receipts and expenditures of the funds of the Union by the Board of Directors, and a report of the work done by said Board of Directors.

SEC. 6.—The Board of Directors shall pay the General Manager such sum for his services as said Board may deem proper, but not to exceed 20 per cent. of the receipts of the Union. Said Board shall meet at such time and place as it may decide upon.

SEC. 7.—*Board of Directors*—The Board of Directors shall determine what course shall be taken by the Union upon any matter presented to it for consideration, that does not conflict with this Constitution; and cause such extra, but equal, assessments to be made on each member as may become necessary, giving the reason to each member why such assessment is required; provided that not more than one assessment shall be made in any one year, and not to an amount exceeding the annual membership fee, without a majority vote of all the members of the Union.

SEC. 8.—Any member refusing, or neglecting, to pay said assessment as required by the Board of Directors shall forfeit his membership, and his right to become a member of the Union for one year after said assessment becomes due.

ARTICLE VII.—FUNDS.

SEC. 1.—The funds of this Union may be used for any purpose that the Board of Directors may consider for the interest of its members, and for the advancement of the pursuit of bee-culture.

ARTICLE VIII.—VACANCIES.

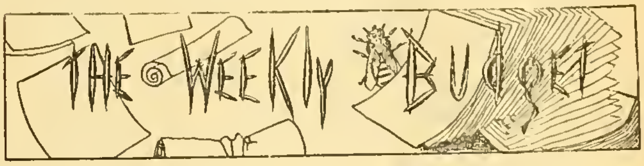
Any vacancy occurring in the Board of Directors may be filled by the Executive Committee; and any vacancy occurring in the Executive Committee shall be filled by the Board of Directors.

ARTICLE IX.—MEETINGS.

This Union shall hold annual meetings at such time and place as shall be agreed upon by the Executive Committee, who shall give at least 60 days' notice in the bee-periodicals, of the time and place of meeting.

ARTICLE X.—AMENDMENTS.

This Constitution may be amended by a majority vote of all the members, provided notice of said amendment has been given at a previous annual meeting.



MR. P. H. ELWOOD, we learn through Gleanings for Jan. 15, "lost, the day after Thanksgiving, the light of their household, a bright little boy of three years."

MR. ALEX. SCHROEDER, of Austria, Europe, writing us Jan. 3, 1898, said:

> "Up to this we have had hardly any winter. I hope it will continue so all the time."

MR. THOMAS G. NEWMAN, the General Manager of the National Bee-Keepers' Union, has removed from 2096 Market street to 1429 Market St., San Francisco, Calif. His correspondents will please notice this change from 2096 to 1429. It brings his office several blocks nearer the business center of the city than before.

MR. L. KREUTZINGER, of this (Cook) county, has just engaged Mr. J. T. Hammersmark as manager of his apiaries for the coming season. Mr. Kreutzinger also has an apiary in

Pasadena, Calif., with some one there to look after it. Mr. Hammersmark spent one season with E. France & Son, the great extracted honey producers of Wisconsin; and also one season with W. D. Wright, a comb honey producer in New York State. Hence Mr. H. ought to be fully able to run Mr. K.'s apiaries successfully.

Mr. Kreutzinger, when sending us the foregoing information Jan. 15, also added:

"When passing on the north side of Madison St., Chicago, east of Fifth Ave., yesterday, I found some one in front of the store piling up comb honey, and selling two sections for 15 cents. So you see your reference, on page 24, to some bee-keepers around Chicago, and complaints, appear justified."

Mr. W. J. Cullinan, of Quincy, Ill., after an invalidism of years, past away last week. He was a brother-in-law of Hon. J. M. Hambaugh, of California. Mr. Cullinan left a well-appointed apiary of 40 colonies of bees. He has for years been a reader of the American Bee Journal, and frequently contributed to its columns in years gone by. Our sympathy goes out to the bereaved wife and relatives.

Mr. H. C. Middleton, DeKalb Co., Mo., when renewing his subscription for 1898, said:

"I am more than pleased with each year's work on the American Bee Journal. Let us ever fight adulteration to the end, and the victory will be won."

CONVENTION PROCEEDINGS

Report of the Northwestern Bee-Keepers' Convention, Held in Chicago, Nov. 10 and 11, 1897.

REPORTED BY A SPECIAL BEE JOURNAL REPORTER.

(Continued from page 38.)

FIRST DAY—Afternoon Session.

A committee, of which Mr. Stone was chairman, appointed in the forenoon, then reported on constitution. On motion the report was received and the committee discharged.

The constitution, as prepared, was then read by Secretary York, and adopted, section by section. It reads as follows:

CONSTITUTION OF NORTHWESTERN BEE-KEEPERS' ASSOCIATION.

Art. I, Name.—This organization shall be known as the Northwestern Bee-Keepers' Association.

Art. II, Objects.—Its objects shall be to promote and protect the interests of its members.

Art. III, Membership.—Any person interested in bees may become a member upon payment of a membership fee of 50 cents annually to the Secretary-Treasurer.

Art. IV, Officers.—Sec. 1. The officers of this Association shall be a President, Vice-President, and Secretary-Treasurer, who shall form the Executive Committee. Sec. 2. All Presidents of the State associations represented shall be Honorary Vice-Presidents of this Association. Sec. 3. The term of office of all officers shall be for one year, or until their successors are elected and qualified.

Art. V, Election of Officers.—Sec. 1. The election of officers shall be by ballot, at the annual meeting, and a majority of votes cast shall elect. Sec. 2. Vacancies in office shall be filled by the Executive Committee.

Art. VI, Duties of Officers.—The officers shall perform all such duties as usually devolve upon similar officers in other organizations. Any other questions shall be decided according to "Robert's Rules of Order."

Art. VII, Place and Time of Meeting.—The place of meeting shall be in Chicago, at such time as shall be determined by the Executive Committee, notice of which shall be given to each member, and publisht in the bee-papers.

Art. VIII, Amendments.—This Constitution may be amended by a two-third vote of the membership in attendance at any annual meeting, provided that notice of such proposed amending be mailed to the members by the Secretary not less than 30 days before the annual meeting.

Dr. C. C. Miller was then elected President of the revived Northwestern Bee-Keepers' Association; Hon. E. Whitcomb, Vice-President; and George W. York, Secretary-Treasurer.

Invitations from Omaha, to hold next year's meeting there, were then read.

CHEAPEST AND BEST WAY TO REAR QUEENS.

Mr. Rohrs—What is the cheapest and best way to rear queens?

Mr. Schrier—If a man only wants a few he would better buy them. He can get them cheaper of a specialist in queen-rearing.

Mr. Thompson—In rearing queens there is a great difference in the size of the queen-cells. I would like to know how many here produce good queens from small cells, or from the biggest they have?

Mr. Baxter—It depends upon whether he means the inside or outside. I have had some of the very best queens produced from what you would think was no cell at all, but when you come to examine the inside it was just as big as in larger looking cells. If the inside is large enough for the purpose, it is sufficient.

Pres. Miller—Another question may come in along with that: As a rule, will those cells that are large inside be larger than common outside?

Mr. Baxter—I would answer no to that.

Pres. Miller—If you are selecting cells, and you have a number in the hive, will you look for one that has a large outside, or would you consider that at all?

Mr. Stone—I always do. If it doesn't have a large outside it is possible for it to have a very small inside.

Mr. Baxter—That depends upon the way the cell is built. If the bottom of the comb projects, the result is it is very large outside. It makes a big difference where it is placed.

Mr. Thompson—The larva is hatcht in the bottom of the cell proper, where it is built out, and then they build it out after the larva has hatcht. How comes that? Does the larva crawl out of the cell proper, or does it stay in?

Mr. Baxter—The larva is always at the bottom of the cell, anyway.

Pres. Miller—Let me see if this is what will agree with your experience: Isn't it true that you will sometimes find in a comb a cell which hardly projects from the surface? Unless you have been careful you hardly notice it at all as a queen-cell; but out of that cell will come just as good a queen as you get from your largest cells. That sometimes happens. But that is because the bees have been forced into that, not left to their own devices.

Mr. Thompson—Do you call the bigger queen the better queen?

Pres. Miller—No, no. I would have a medium-sized queen; but as a rule the larger cells will have the better queens.

Mr. Thompson—If it is the quantity of the food that produces a good queen in a large cell, then there cannot be so much food in a small cell, and consequently they will not be so good.

A Member—I have often noticed, after a queen has hatcht, that there was an abundance of royal jelly at the bottom of the cell left that was not utilized, and I think it is, no matter what size of cell it is, as long as that larva had a sufficient quantity of royal jelly to develop it. The size of the cell will not make any difference in the queen.

Mr. Wheeler—I have found this to be true, that a cell that hangs at the bottom of the comb, and hangs under, is quite apt to have a dead bee in it, for some reason or other. When I pinch it I very often find that queen dead; but I very seldom find a queen dead that is reared in a comb, imbedded—hanging down but imbedded in the comb along with other brood. They are almost always very lively and strong when they are hatching. I very often pinch them out just when they are hatching.

Pres. Miller—Will you tell us why that is, Mr. Wheeler?

Mr. Wheeler—I think that one reason is that where they extend down below the cluster they are apt to be exposed to chilly winds and such things; but where they are right in the brood and imbedded in it alongside of it—I prefer to have a cell of that kind rather than one that hangs below the frame.

Mr. Rohrs—My experience with rearing queens has been just the same. It is that from the bottom of the brood-frame we very often find dead queens, but those on top are better, and I coincide in that with Mr. Wheeler, that I think they are kept better warmed through, and a more regular temperature than at the bottom.

[Continued next week.]

GENERAL ITEMS

Bees Did Very Well.

My bees did very well the past season, having received 500 pounds from 17 colonies. GEO. BISCHOFF.
Des Moines Co., Iowa, Dec. 24.

Bees a Failure—Prospects Not Good.

Bees have been a complete failure here the past season, and prospects are not very good for next season. B. VOLKERING.
Polk Co., Wis., Jan. 4.

Bee Journal a Great Help.

I am more than pleased with the Bee Journal. It has been a great help to me. I would have it if the price were two dollars per year. ROBT. NORTMAN.
Jackson Co., Wis., Dec. 18.

Bees Did Well.

Bees have done well here this year. White clover was fine. The fall crop was not so good as last year, being too dry. Bees are in good condition for wintering.
C. V. MANN.
Sangamon Co., Ill., Dec. 20.

Best Honey from Cotton-Bloom.

The honey-flow in this part of Texas was excellent. The best honey we get is from the cotton-bloom. We credit our success to the American Bee Journal
TENA S. EDZARDS.
Lamar Co., Tex., Jan. 5.

Good for Arkansas.

I had six colonies, spring count, took off 1,000 pounds, and increast to 10 colonies. I took the prize on fine comb honey at our county fair. How is that for Arkansas, where bee-culture is in its infancy?
C. S. ROBERTS, M. D.
Johnson Co., Ark., Dec. 23.

Made a Good Record.

My bees made a good record the past season. From 19 colonies, spring count, I secured 2,400 pounds of honey, all comb but 140 pounds—in round numbers 126 pounds per colony. I increast to 42. Not bad for Cook county, is it? G. W. STEPHENSON.
Cook Co., Ill.

A Valuable Kind of "Weed."

My report is as follows: 10 colonies, spring count, and received 500 pounds of nice white clover honey, besides increasing to 22 colonies. I can't get along without the American Bee Journal.
Carroll Co., Ill. GEO. W. WEED.

Drouth and Frost.

I started last spring with 32 colonies, had 17 swarms, and got about 300 pounds of white clover honey, when the drouth set in and the flow stopt until fall, then I got 800 pounds of honey. I would have gotten more if the frost had not killed the smartweed, which was in its prime at that time.
Woodford Co., Ill. S. BURTON.

A Lady Bee-Keeper's Report.

Bees did fairly well here the past season, and went into winter quarters in good condition. From 18 colonies last spring I increast to 41, and have 450 pounds of surplus honey, and an abundance of winter stores for all. This is not a large yield of surplus for this country, but an average crop. The latter part of the summer and early fall

Only 6 cts. per Pound in 4 Can Lots or Over.

Finest Alfalfa Honey!

IT SELLS ON TASTING.

The Honey that Suits All Who Buy It.

We can furnish **White Alfalfa** Extracted Honey, in 60-pound tin cans, on board cars in Chicago, at these prices: 1 can, in a case, 7 cents per pound; 2 cans in one case, 6½ cents; 4 cans (2 cases) or more, 6 cents. The Cash MUST accompany each order.

☞ A sample of the honey will be mailed to an intending purchaser, for 8 cents, to cover postage, packing, etc. We guarantee purity.

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They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

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GEORGE W. YORK & CO., 118 Michigan St., CHICAGO, ILL.

were too dry for a good honey-flow, and as most of our honey-producing plants bloom at this time, the honey-flow was cut short. We never have such large yields as are reported from some parts of the country. but we seldom fail to get some surplus, and nearly always get plenty of winter stores.

I am well pleased with the Bee Journal, and I am greatly interested in the busy bees. I want to learn more of them.

Saline Co. Nebr. **Mrs. E. J. Trout.**

Expect to Begin in March.

If the winter and spring are favorable, we will commence business in March with 500 good, strong colonies. **G. W. Weeks.**

Orange Co., Calif.

Bees Nearly a Total Failure.

Bees have been as near a total failure as we ever had in this locality. The most of them stored enough to winter on, but very little surplus, and that of poor quality. We had late frosts in the spring, and in June a hail-storm. Bees stopt swarming, and took the honey in the sections below.

Dodge Co., Minn. **D. E. Whiting.**

Had a Fine Rain—Prospects Good.

We have just had a fine rain of about 1¾ inches, with prospects of plenty more, which means a good honey crop for 1898. I wish we were like the bees in the production of honey, in that we would not have to figure on profit, but we seem slow to learn from them, that uses are the true motive in production. **W. B. Hunter.**

Riverside Co., Calif., Jan. 11.

Did Well the Past Season.

I have been reading the Bee Journal for some time and like it very much. I obtain much information from it, and would not like to be without it. I have not been keeping bees a great while. I have 10 colonies, and they did well the past season. I hope they may increase next year. They are all in good condition for winter.

Willard Aldrich.

Allamakee Co., Iowa, Dec. 23.

Credits the Bee Journal with Half.

I commenced last spring with 10 colonies, increest to 22, and produced 873 pounds of very fine honey, 256 being comb honey in one-pound sections, which I sold to my neighbors at 10 and 12½ cents. I give the "Old Reliable" credit for at least one-half of my success. **O. B. Montfort.**

Shelby Co., Ky., Dec. 27.

Report for 1897.

I commenced the spring of 1897 with about 200 colonies in one yard, increast to 280, and got about 16,000 pounds of honey, half comb and half extracted. Bees are in fine condition for another year. I weighed 25 colonies, and they averaged 58 pounds each, without tops and blankets. They are wintering finely. I could not do without the American Bee Journal. Long may it live and prosper. **N. Staininger.**

Cedar Co., Iowa, Jan. 10.

A Report from West Virginia.

There are no regular bee-keepers in my neighborhood, but each farmer keeps a few colonies. It seems to be too rainy here in early spring to be a good bee-country. In 1897 it was very wet till August; from this fact the honey-crop was light, as we have no fall flow. I harvested only 586 pounds of comb honey from 25 colonies, spring count, and increast to 30.

This winter is very open so far (now Dec. 21). I have packt my bees all ready for the cellar, but the weather keeps so open they are still on the summer stands. I have not as yet introduced the Italian bee; my bees are all blacks, or the old German bee, and they seem so healthy I am afraid if I go to importing other stock I will import disease, but I am thinking of trying a few Italians next spring. My bees are very gentle. My wife and I can handle them by the day, as it were, and never get a sting, but we use a little smoke, but no gloves or veils.

I appreciate the American Bee Journal very much. I feel that I could not succeed with my bees as I do if it were not for this valuable help. **Ira Shockey.**

Randolph Co., W. Va., Dec. 21.

Need to be Re-enthused.

The cheapness and slow sale of honey have knockt the enthusiasm out of bee-keepers in this locality, but I am in the business to stay awhile at least, unless I starve out. I could not get along without the American Bee Journal, and I wish it prosperity. The honey-yield was rather below an averge crop in this section the past season. **A. D. Watson.**

Tioga Co., Pa.

No Winter Protection Needed.

My bees are doing well on the summer stands without any protection whatever. They have flown every day except two, when it rained all day. The currant bush will bloom in about two weeks now, which will start the bees in their spring work. Think how pleasant it is here! I have sat till bedtime, the past two or three nights, with the door wide open, and without a fire. **Mrs. M. M. Dunnegan.**

San Patricio Co., Tex., Jan. 6.

A Winter Experiment.

I can't do without the American Bee Journal. I have 40 colonies put away for winter—30 colonies in the cellar, and 10 on the summer stands. I set them in a row about 6 inches from the ground, and about 6 inches apart in the row. Then I put boards on the northeast and west, 8 inches from the hives, and packt under and between, and on top solid with forest leaves, then I put good cases on top. This is an experiment with me. **W. L. Mitchell.**

Whiteside Co., Ill., Jan. 10.

Report for 1897.

My report for the year 1897 is, 900 pounds of comb honey of good quality; spring count, 30 colonies, increast to 70. Honey is rather dull sale at 12½ cents per pound. I sell mostly direct to consumers. I ran out of supplies last season. I would advise my bee-keeping friends to lay in their supplies in time. "A stitch in time saves nine." I found it so last season.

I don't see how a beginner can get along without the "old reliable" American Bee Journal. "Beedom Boiled Down" is very fine.

We have had steady winter in this part of the State since Dec. 3, with five to eight inches of snow. **J. E. Enyart.**

Gentry Co., Mo., Dec. 25.

Moving Bees Around for Forage.

I have had only two years' experience with bees, but with fair success. Last season I commenced, in the orange groves, with 25 colonies, had to transfer nine of them, and when the orange bloom failed I moved them seven miles to the mountain white sage, and when that failed, on Aug. 15 I moved six miles to the alfalfa range, and that lasted until the last of October. I now have the bees back in the orange grove, ready for the bloom about April. 15. I wound up the season with 2,800 pounds of extracted honey, and increasing to 57 colonies, with plenty of stores for the winter.

To prepare for moving I took some laths ½x1½ inches, ript in the center, cut them off about six to eight inches in length, then pusht them down between the frames at one end of the frames only, picking out different sized sticks so as to fill the space in each; and both bottom and top boxes, fastening the top and bottom boxes to-

Sweet ⁝ Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
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Alsike Clover........	.70	1.25	3.00	5.75
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Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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Southern Home of the Honey-Bee

Is now ready for your orders for Queens of either 3 or 5 **Banded Italians and Steel Gray Carniolans.** More than 300 Tested Queens to begin with. Untested, either race, 75 cts. each; June and until October 50 cents each. Tested $1.00 each. Good Breeders, $2 each. Straight 5-Banded or "Faultless" Queens, $5.00 each. Satisfaction guaranteed.

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THE PROGRESSIVE BEE-KEEPER

Is a 28-page monthly bee-journal publisht at Higginsville, Mo.—price 50 cts. a year. With the year of 1898, we begin the eighth volume, hence it is past the experimental stage. **R. B. Leahy** and **G. M. Doolittle**, editors. Some of the features of 1898 will be a continuation of "**Wayside Fragments**," by **Somnambulist**. "**Eperience and Its Lessons**," by **R. C. Aikin**. This series of articles will be reviewed by Mr. Doolittle, which is practically giving *his* experience with its lessons. "Experience and Its Lessons," as reviewed, will be a gold-mine for beginners and advantageous to those more advanced in bee-culture. The somnambulist articles are written in a pleasing style, as none but "Sommy" could write them. They are highly entertaining and instructive. **Dr. C. C. Miller** and other popular writers also cotribute to its columns. The PROGRESSIVE is a popular journal at a popular price. Printed in the highest art, on beautiful paper. Fearless in its character, newsy in its contents, and artistic in its make-up. Remember the PROGRESSIVE BEE-KEEPER is but 50c. a year. The PROORESSIVE and that "one only" book for beginners, the **Amateur Bee-Keeper**, by **Prof. J. W. Rouse**, both for 65c. A sample copy of the PROORESSIVE for your name, and a beautiful, illustrated catalog of apiarian supplies for the asking. Address,

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This Very Remarkable Social Story,

The thought of which is the application to all life of the test question, "What would Jesus do?" has had an extraordinary sale, even during the "dull times" of summer. In the guise of a dramatic story, the book makes a powerful appeal to the public conscience in the lines in which interest is now so deeply aroused, namely, the social conditions affecting the relations of employer and employe, rich and poor, the Christian and the world, the saloon and the voter, etc. The author believes his test—"What would Jesus do?"—to be nothing less than revolutionary, and applies it with searching directness, not only to commercial and social, but also to religious life. The deep interest which the story has awakened is indicated by the thousands that have been sold, and the many voluntary testimonials, among them being the following:

"The reading of the book will search many a heart, and ought to lead to a simpler, holier, and more fully consecrated Christian life."—Sunday-School Times.

"Singularly impressive....It is a sermon in action, and one that cannot fail to touch the heart."—New York Christian Advocate.

"Mr. Sheldon's book makes a strong impression as a plea tor more simplicity of living, for more economy and more principle in the matter of personal expenditure, and for the application of the laws of right eousness and justice to the methods of busi- administration."—New York Independent.

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Bee-Keeper's Guide—see page 43.

gether by drawing a wire tightly around the whole, including the bottom-board. I am satisfied with the experience of moving, and expect, if I live, to manage them so next season, provided all other conditions are favorable. I have heard of different ways of preparing bees for moving, and finding this plan very efficient, I thought it might be of use to some one else.

W. J. LINVILLE.

San Bernardino Co., Calif., Dec. 27.

Wintering Well.

My bees are wintering well so far—170 colonies in the cellar, and five on the summer stands. J. D. BLOOD.

Linn Co., Mo., Dec 28.

A Good Year for Bees.

The past was a very good year for bees in this locality. We had a good crop of white clover honey, but the fall flow did not amount to much. The American Bee Journal is first-class. CHAS. D. HANDEL.

Carroll Co., Ill., Jan 2.

Bees in Good Condition.

I bought a colony of bees the spring of 1895, and now have 14 in apparently good condition. I have obtained much valuable information from the American Bee Journal. D. W. WILL.

Somerset Co., Pa., Jan. 1.

Prospect Unfavorable for 1898.

I would not miss the American Bee Journal for anything, as it is a great help to me. My bees did well the past year. It is very dry now, and not much of a prospect for honey for next year. B. P. SHIRK.

Kings Co., Calif., Dec. 30.

Poor Season—Some Fall Honey.

We had a poor season in 1897, with some fall honey, so that the bees went into winter quarters with ample stores. Success to the American Bee Journal.

Kewanee Co., Wis. F. E. WYMAN.

Prospects for a Better Clover Year.

Honey is a little slow sale here, but I have 100 colonies of bees now in winter quarters in splendid condition, with the prospect here of a better clover year coming than we had last.

CHAUNCEY REYNOLDS.

Sandusky Co., Ohio, Dec. 21.

Stopping Robbing.

I have read much concerning robber bees. I had a colony last spring which was weak in bees; some of the rest took to robbing, and I tried all remedies given in the Bee Journal, but to no purpose. I moved the colony away, and put another strong one in its place. They stopt robbing in one hour. SOL HARPST.

Mercer Co., Pa., Dec. 25.

Prizes the Bee Journal.

I feel much attacht to the Bee Journal, and look for it every Friday, as it comes without fail. I have two volumes bound, and the one of 1897 will be as soon as I receive all the numbers, for I think with the help of the index they are as good as the text-books, for I get the opinions of the best writers. JOHN SUTER.

Ontario Co., N. Y., Dec. 22.

A Good Word for Bee-Papers.

The bee-keepers throughout America should feel very thankful that they are so abundantly supplied with weekly and monthly publications devoted to the interest of the busy bee. I cannot think but it is stupidity on the part of a good many who pretend to keep bees, to think they

can get along without subscribing for one or more of the many good journals now offered at such very moderate prices, which would enable them to keep abreast of the times, as well as keep well-informed of the advancements of the pursuit. I have often thought that one can judge pretty well, as soon as entering a man's bee-yard, whether he is a subscriber and reader of a bee-paper or not, wherewith to keep himself posted. Not less than five different bee-periodicals come to my address every month, and I read every one of them, from cover to back; and although my "other half" says I read too much, I tell her the result of the honey harvest always decides the matter. Long live the American Bee Journal.
D. W. HEISE.
Ontario, Canada.

Enjoys His Bees.

I have 34 colonies of bees altogether—26 in the country 10 miles from the city, and eight in the city. I started with three colonies in my city apiary last spring, and I increast by artificial swarming to eight. I never get hungry or tired while working for my bees. I enjoy them thoroughly; it is a pleasure.
J. R. FELT.
Monroe Co., N. Y.

Making a Success with Bees.

In 1895 I had a few colonies in old box-gums. I got very little honey from them, so after I began to read the Bee Journal I thought I would try the Langstroth hives. I transferred the bees, and I started last spring with 13 colonies, increast to 23, and I have taken and sold about 1,100 pounds of comb honey. My bees are all Italians, the only ones in this part of the country, that I know of. One of my neighbors got me to send south for 13 Italian queens; I did so, and introduced them for him, and did not lose a queen. So much, Mr. Editor, for the American Bee Journal.
P. McDOWELL.
Mason Co., Ky., Jan. 5.

"Started" by a Bee-Keeper.

I am a brand new bee-keeper, only a little over a year old in the business, but I like it very much so far.

I want to say "Amen" to the editor's reply to John A. Pease, of California, as I am one that was "started" in the business by a bee-keeper. I secured a little over 78 pounds of comb honey per colony, spring count, from 14 colonies, and increast to 24 the past season, which I am wintering on the summer stands. I like the American Bee Journal very much.
J. S. DOWDY.
Logan Co., Ill., Dec. 27.

Fairly Good Season in 1897.

I had a fairly good season in 1897. I commenced with 65 colonies, bred up to 90, and obtained 5,200 pounds of comb honey, nearly all white, not over 400 pounds of amber and dark. I am selling this crop at a lower price than ever before—10 cents for white and 8 cents for amber and dark. I have yet about 2,500 pounds on hand, but it will all go in good time. Clover is nearly all killed in this vicinity by drouth. I have kept bees 30 years at this place, and I have never had an entire failure. I do not keep nearly as many now as I have in years past.
S. PAGE.
Carroll Co., Ill., Jan. 10.

Poorest Season for Years.

I have been a constant reader of the American Bee Journal ever since I have been interested in bees, which will be 11 years in the spring, and I would not like to do without it now.

The past was the poorest year for surplus honey since I have had anything to do with bees, still not quite a total failure, as I harvested perhaps 18 or 20 pounds (mostly extracted) per colony, spring count, but some of the bee-keepers in this locality having larger apiaries had to feed some to carry the bees through the winter. I never aim to keep more than 20 or 25 colonies, and try to have them good and strong.
S. C. BOOHER.
Woodbury Co., Iowa, Dec. 29.

Bees in Good Condition.

I have 81 colonies of bees in winter quarters in good condition. I had 57 last spring, increast to 81, and took 2,357 pounds of mostly comb honey, and 24 pounds of beeswax. Quite a number of swarms went away, as I lost my wife July 5, and that day I had six swarms, but paid no attention to them for the next two days. I am left with three little boys.
AUSTIN REYNOLDS.
Monroe Co., Wis., Jan. 10.

Will Test the Danzenbaker Hive.

What I mean on page 715 (1897) concerning the Danzenbaker hive being too expensive was, that to handle a colony of bees it requires two hive-bodies and two supers, which at catalog prices would cost as much as a double-wall hive, and not nearly so good for this climate. Mr. Danzenbaker's hive is a good one for a warm climate, and also for anyone that likes a single-wall hive. I did not mean to harm Mr. Danzenbaker, nor his hive. I want to try them for 1898, and of course his hive must stand on its own good qualities. I will give it a fair and impartial test.
DAVID N. RITCHEY.
Franklin Co., Ohio.

Has Kept Bees 14 Years.

This is my 14th year at bee-keeping, and I have produced $2,500 worth of honey. I commenced the first season with six colonies, and the last with 70, and the past season I got $425 worth of honey, besides increasing from 70 to 96 colonies.

While at the Buffalo convention I introduced myself to Messrs. York, Doolittle, Miller, Hutchinson and Root. I had become so well acquainted with them through reading their writings that I felt as if they were old friends of mine, altho I was an entire stranger to them. I am engaged in farming and peach-growing, and cannot give my bees as careful attention as I would like to do.
D. L. FILES.
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New York.—The Ontario County, N. Y., Bee-Keepers' Association will hold its ninth annual convention at Canandaigua, N. Y., Jan. 27 and 28, 1898. An interesting program is in course of preparation. All are invited.
RUTH E. TAYLOR, Sec.
Bellona, N. Y.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Ill., Dec. 13.—Fancy white 11 to 12c. No. 1, 10c.; fancy amber, 8 to 9c.; No. 1, 7c.; fancy dark, 7c. Extracted, white, 5 to 6c.; amber, 4 to 5c.; dark, 4c. Beeswax, 26 to 27c.

The demand for comb honey is not satisfactory, and it can be bought at even lower prices than quoted, where it is not in the hands of regular dealers. There seems to be no outside demand. Extracted without special change. Beeswax is scarce.

Milwaukee, Wis., Dec. 13.—Fancy white, 12 to 13c.; No. 1, 11 to 12c.; fancy amber, 9 to 10c.; fancy dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 4½ to 5c. Beeswax, 25 to 27c.

This market has been fairly sustained on honey since our last report. Values remain about the same, as there has been a very good consumptive demand, especially for extracted, while the comb honey has seemed to accumulate with increast receipts, and we feel to meet the demand even if at a reduction from quotations. There seems to be more demand from those who eat honey than in former seasons, which is a good feature of the trade which we desire to encourage. We are expecting a good trade from this forward.

Cleveland, Ohio, Dec. 15.—Fancy white, 12 to 12½c.; No. 1, 11 to 12c.; No. 1 amber, 9 to 10c. Extracted, white, 6 to 7c.; amber, 4 to 5c. Beeswax, 22 to 25c.

New York, N. Y., Dec. 22.—Fancy white 11 to 11½c.; off grades, 9 to 10c.; buckwheat and mixt, 6½ to 7c. Extracted, California white, 5 to 5½c.; light amber, 4½ to 4¾c.; white clover and basswood, 5 to 5¼c.; buckwheat, 4 to 4½c.; Southern, 50c. a gallon. Beeswax is in good demand at 25 to 27c.

Our market remains quiet. Fancy grades of white comb are about cleaned up, and these would find sale on arrival at quotations. We have a large stock of buckwheat, mixt, and off grades of white, and, as the demand for these is very light, we cannot encourage further shipments for the near future. Extracted of all kinds is selling fairly well.

Minneapolis, Minn., Dec. 15.—Fancy white, 11 to 12c.; No. 1, 10 to 11c.; fancy amber, 10c.; No. 1, 9½c.; fancy dark 9 to 9½c.; No. 1, 8 to 9c. Extracted, white, 5 to 6c.; amber, 4 to 4¾c.; dark, 4c. Beeswax, 23c.

Market holds firm at above prices. Good demand for extracted. Wax is quiet but firm at 23c.

Albany, N. Y., Dec. 13.—Fancy white, 12 to 13c.; No. 1, 11 to 12c.; fancy amber, 8 to 9c.; No. 1, 8c ; fancy dark, 8c.; No. 1, 7½ to 8c. Extracted, white, 5 to 6c.; amber, 4½ to 5c. dark, 4 to 4½c.

There is an ample stock of comb on hand and selling freely at quotations. Extracted is not plentiful and from information received there is not much in the hands of producers.

Buffalo, N. Y., Jan. 14.—Strictly fancy 1-pound comb honey is more active at mostly 10c., occasionally 11c., but all other gradas are dormant and have to be cut to almost any price to move them, ranging from 8c. down to 5c. Extracted is also very dull at 4 to 6c. We cannot recommend the shipping of honey here unless it is strictly fancy 1-pound sections.

There is no selling pressure of consequence on desirable lots of water white, either comb or extracted, such being held as a rule at full quotations. Amber grades are in greater supply than the demand and market for this class presents an easy tone. Dark qualities are in poor request, despite low asking figures. Beeswax is firm at current quotations, with very little offering, either from first or second hands.

St. Louis, Mo., Jan. 17.—We quote honey nominal, but very little selling. Demand is light. White comb, 1-lbs., 10 1-2 to 12c.; amber, 8 to 10c.; dark, 5 to 7c.; broken comb, 4 to 7c. Extracted, in cans, white, 5¼ to 5 1-2c.; light amber, 4¾ to 5c.; amber, 4¼ to 4 1-2c.; dark, 3 1-2 to 4c. Beeswax, 25 to 25 1-2c. To sell honey in lo's above prices would probably have to be shaded a little.

Indianapolis, Ind., Jan. 15.—Fancy white, 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand.

Kansas City, Mo., Jan. 20.—Fancy white, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5¼ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

The market is well supplied, and demand is light.

Boston, Mass., Jan. 18.—Fancy, in cartons, 12½ to 13c.; in glass, 11 to 12c.; A No. 1, 10 to 11c.; No. 1, 9c.; No. 2, 8c.; No. 3, no sale. Beeswax, 27c.

The demand for honey is light on all grades, with a full supply. Pure beeswax is in good demand, but supply is light.

Philadelphia, Pa., Jan. 18.—Fancy white, 10c.; No. 1, 9c.; amber, 8c. Extracted, white, 5c.; amber, 4c.; dark, 3¾c. Beeswax, 28c.

Late arrivals of California honey have demoralized our market.

Cincinnati, Ohio, Jan. 17.—There is no change in prices, but rather a slow demand for all kinds of honey. We quote 10 to 13c. as the range of prices for best white comb honey, and 3 1-2 to 6c., for extracted, according to quality. Beeswax is in fair demand at 25 to 27c. for good to choice yellow.

Detroit, Mich., Nov. 9.—Fancy white, 11 to 12c.; No. 1, 10 to 11c.; fancy amber, 9 to 10c.; No. 1, 8 to 9c.; fancy dark, 7 to 8c. Extracted, white, 5 to 6c.; amber, 4 to 5c. Beeswax, 25 to 26c.

List of Honey and Beeswax Dealers.

Most of whom Quote in this Journal.

Chicago, Ills.
R. A. Burnett & Co., 163 South Water Street.

New York, N. Y.
Hildreth Bros. & Segelken,
120 & 122 W. Broadway.

Kansas City, Mo.
C. C. Clemons & Co., 423 Walnut St.

Buffalo, N. Y.
Batterson & Co., 167 & 169 Scott St.

Hamilton, Ills.
Chas. Dadant & Son.

Cleveland, Ohio.
A. B. Williams & Co., 80 & 82 Broadway.

Philadelphia, Pa.
Wm. A. Selser, 10 Vine St.
Mr. Selser handles no honey on commission

St. Louis, Mo.
Westcott Com. Co., 213 Market St

Minneapolis, Minn.
S. H. Hall & Co.

Milwaukee, Wis.
A. V. Bishop & Co.

Boston, Mass.
Blake, Scott & Lee., 57 Chatham Street.

Detroit, Mich.
M. H. Hunt, Bell Branch, Wayne Co., Mich.

Indianapolis, Ind.
Walter S. Pouder, 162 Massachusetts Ave.

Albany, N. Y.
Chas. McCulloch & Co., 380 Broadway.

Cincinnati, Ohio.
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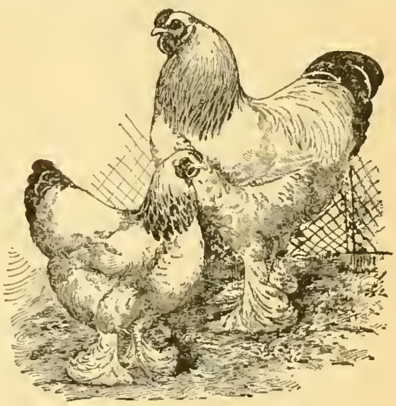

Queens and Queen-Rearing.—If you want to know how to have queens fertilized in upper stories while the old queen is still laying below; how you may *safely introduce* any queen, at any time of the year when bees can fly; all about the different races of bees; all about shipping queens, queen-cages, candy for queen-cages, etc.; all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, everything about the queen-business which you may want to know—send for Doolittle's "Scientific Queen-Rearing"—a book of over 170 pages, which is as interesting as a story. Here are some good offers of this book:

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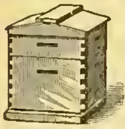

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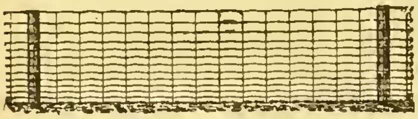

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CONTRIBUTED ARTICLES

Bee-Moth or Wax-Moth—Some Experiences.

BY C. THEILMANN.

On page 723 (1897), Prof. A. J. Cook has kindly answered the questions I have askt him regarding the bee or wax moth, for which we tender him thanks. Some of the ways he describes about the moth are not yet clear to me, or don't agree with my experience and that of other bee-keepers. He says: We always find the moths lurking or flying about where there are combs, bee-hives with bees, empty hives or boxes with combs, etc. Some years ago I stood before a big, dry elm in my timber, whose bark was loose one inch or so. By accident I pulled the bark from the tree about 8 inches, and to my surprise I saw several bee-moths running around on the inside of the bark, just as they do when disturbed elsewhere in their hiding-places. This was nearly a mile from my apiary. Now I am tempted to ask the Professor, How did the moth get there? or where were they hatcht out? and what did they live on?

A bee-keeper tells us in the Acker and Gartenbau-Zeitung that he knows several bee-trees in his vicinity which are stockt with bees nearly every year, but are always destroyed in two to three months by the bee-moths. W. Buechner, from Texas, writes on same page: "I have found dozens of moths in the pupa state mostly in winter time in hollow trees, but nowhere except where a colony of wild bees were destroyed by the moths." This evidence was given in opposition to my theory, but are they not a strong argument on my side of the question?

Those *wild* bees were surely not Italians, else not all of them would have been destroyed by the moth *alone*. But I would ask again, Where did these moths come from, and on what did they live the other seven or eight months of the year?

By the way, does any one know how old a bee-moth gets to be? and how far away from her birth or hatching-place she is likely to move or fly? It would surely interest many of the readers to know. Will Prof. Cook kindly give us some information on this question also?

I am with the Professor when he says, "If possible she (the moth) goes to the combs, else she lays her eggs as near to them as she can reach, as I have had combs attackt that could not possibly be reacht by the moth." The latter has been just my experience, and therefore, and for other reasons, I believe that the moth-eggs are in the pollen of combs before taken from the center of strong colonies of Italians, where it is impossible for moths to lay eggs, and if there were newly-hatcht moths on such combs, they would be visible in three or four days on the combs after taken from the bees. But that is not the case, for it takes from 7 to 12 days in warm weather before any signs of moth-worms are visible on such combs, and then always on the pollen. Besides, my bees carry and clean more or less moths, of all stages of development, out of their hives all the year around, which I have often witnest in my winter cellars, when they are generally left at the entrances of the hive.

I doubt very much that the moth lays eggs in a temperature of 40° to 42°, as in the case of my bee-cellars for five months while the bees are in them, and if any eggs were laid in or near the hives in summer, they would have been hatcht long before real winter set in, in this latitude as a rule about Nov. 10.

Taking all these connecting evidences, and the fact the moth is a night-caterpillar, whose nightwork is hard to understand and observe, I cannot see any other way than that the bees carry and store the eggs with the pollen, and that the moths live and thrive elsewhere besides at or around bee-hives and apiaries.

Before I close I will give another experiment I witnest not long ago. As the season here was a poor one, I had to feed my bees for winter, for which I boiled sugar and water together and added some honey until I had a 50-gallon barrel nearly full. This was on the evening of Oct. 13, 1897. The barrel was left open about 15 rods away from my home apiary, in the open air to cool of. The night was warm for the time of year, and on the morning of the 14th the thermometer showed 65° above zero. I went to the sugar-honey barrel and found it nearly covered with dead and dying bee-moths, with their wings spread and fastened to the sweet mass, and after I pulled them out and had thrown them away, I was

Father Joshua Terry, of Utah—See page 68.

sorry that I did not look for eggs about them. I counted 23 bee-moths, and 2 of those little wee ones described in Prof. Cook's Manual.

Now, I'd like to know where so many moths came from all at once, for I had not seen any around my bees for a long time before this. There was surely many more that ate of the sweets that did not get stuck fast. I am quite sure that they were not all reared around my bees, for everything that would induce the moth is kept snugly out of their reach. I am aware that we can trap quantities of moths with sweets in the summer time, but I never saw them in such numbers as late at October, when we supposed they were nearly all dead or asleep.

The little, wee moth does sometimes considerable mischief with comb or section honey. Some 15 years ago I had about 6,000 pounds of very fine, delicate linden honey in my honey-house for about four weeks. I had to close it tightly as the bees began getting in and robbing. The room got warm and very damp. I sold 4,000 pounds of it to a Minneapolis firm, not noticing anything wrong about the honey when shipt, neither did the receivers of the honey. About four weeks after, I saw part of this honey stored in a large airy room on the second floor, when one of the firm told me that my honey was wormy. I lookt and found little perfectly round holes (the size a common needle would make) over much of the cappings of the honey, and some little webs and mealy stuff, and here and there a little worm in the corners and edges of the combs, but there was not quite enough to spoil the sale of the honey.

Three years ago I bought 500 pounds of white honey from a neighbor bee-keeper, who kept the honey for about two months in a tight, close room under the roof of his house, and when he delivered the honey about one-half of it was unfit for market. On some combs there were small patches where the little holes joined and left the honey almost bare of cappings.

These are the only instances of this moth which came under my observation. It seems that they live mostly on the cappings of the combs, and probably some honey, for it is a rare thing that I have any pollen in my section honey that they could feed on. I believe when honey is kept in a warm, airy room, that this moth will do but little harm to the bee-keeper, neither will the bee-moth if the bee-keeper understands the business.

I have never seen the *wee* "winged" moth that I could be sure of. The two in the barrel above-mentioned compared well with the picture in Prof. Cook's Manual, so it is probably a night-caterpillar, in that respect like the bee-moth.

I cannot agree with Prof. Cook when he says: "I do not think the bee-moth ever lays her eggs in the pollen in the flowers; we never see her about the flowers as we certainly should if her nits were there."

Does not the flower furnish all the elements the moth exists on? Why should she not visit them, when they contain her very life? Does not every critter like to be and live in its elements, or is the moth an exception? By no means do I think that every flower is stockt with moth-eggs; we may examine thousands and not find an egg, but every indication of my experiments leads me to believe that many eggs are stored in the combs with the pollen. That we never see the eggs on the pollen is no proof that the moth will not lay them there, at distances away where they cannot find a better chance to do so. No one would claim that we have no north pole because no one ever saw it. Wabasha Co., Minn.

Ripening Honey—Sweet Clover Eaten by Stock.

BY J. A. BEARDEN.

I see Mr. E. B. Tyrrell, on page 731 (1897), is in favor of everybody who reads the Bee Journal giving their opinion as to the ripening of extracted honey, but as he does not say whether he wants it ripened naturally or artificially, but leaves us to infer that he meant naturally or as the bees ripen it, I will give my opinion be it ever so light.

The subject is a very important one, as it means good or bad honey according as the bee-keeper wills, altho the honey may be from a good source; for of all kinds of honey, that which is extracted from the combs in a watery stage is the worst yet; still, it can be left on the hives too long.

For instance, a friend of mine had a fine lot of aster honey in his hives in the fall of 1896, but as he had no extractor he got me to take out the honey after there had been a few cool nights, and as aster honey becomes candied very quickly after it is gathered, this lot was about one-sixth candied in the combs, and of course it would not throw out of the combs, altho I run my extractor very fast. So you see one kind of honey at least must not be too severely ripened.

But I don't think there is any need to be in a hurry about extracting most kinds of honey, for I have my first lot to taste that was taken out before it was capt, that was as good as that which was thoroughly capt over before it was extracted.

I have a rule which acts well for *me*, to determine when honey is ripe enough to extract. It is this: When a honey-flow is on, you can hear the bees making a very loud humming, at night especially; this is the bees' automatic evaporator at work on the newly-stored honey, and as soon as this night humming has almost ceast, your honey is all right and ready to extract. But of course you will not get as much honey as if you had extracted twice or more times during the flow; but your honey will be of heavy body and better taste than that taken off too soon.

If a man (or woman) has a good reputation for producing a fine grade of honey, he or she can ruin that reputation very easily by selling a few lots of thin, foamy or half-soured honey, for such will be the case if the honey is from basswood, not thoroughly capt or ripened.

Mr. O. O. Poppleton, on page 690 (1897), says he has never had basswood honey so thin as to drip from the combs as Mr. C. P. Dadant has; still, such is the case with me, if it should happen to be very damp, rainy weather at the time of gathering, but if very dry weather is on hand at gathering time the honey is of course very much thicker, but not thick enough.

HOGS, SHEEP AND COWS AFTER SWEET CLOVER.

I have been trying to get some sweet clover to grow on some waste lands about me, but, pshaw! the hogs just hunt it up and dig for the roots as long as they can smell one. And sheep and cows just look it up and eat the last sprig that they can find, for 'tis so much earlier than common red clover.

Lincoln Co., Tenn.

Comments on the "Golden" Management for Producing Comb Honey.

BY W. W. M'NEAL.

On page 742 (1897), Mr. Golden asks for comments. All right, Mr. Golden.

How do you manage to keep pollen out of this double super during the first five days after the swarm is hived? Just why the bees should fill these sections with such choice honey and leave no pollen is decidedly a wrinkle I fail to see. My experience is that bees are inclined to place themselves and their brood between the entrance and the stores. Now, pollen being something that cannot be so easily carried away, is often given a place close to the entrance. This is more noticeable in early spring, and especially so if the frames run parallel with the entrance. The runways provided at the sides of the super may have something to do with it; but why the field-bees, upon their return to the hive, would run up through these to the brood-combs above, and there leave the pollen, returning to the sections below with the honey, is the query with me.

Of the two evils, honey stored in comb built the previous season, and that which is stored in comb built the present season, but containing more or less pollen, I would choose the former for two reasons: 1st, The average consumer of honey would hardly detect the harshness of the comb at all if the precaution had been taken to break away the varnisht face of the combs before giving them to the bees. 2nd, But they *would* detect pollen were it there, and so would the little wax weevil! It is a rare thing to find pollen in sections placed over the brood-combs, save in hives where such room is limited; and when a case of partly-filled sections has been given to a swarm newly hived on frames with only starters in them.

I have tried to get a swarm to build comb under nearly the same conditions that Mr. Golden outlines, but failed in every instance. My hives were prepared thus: If a colony run for extracted honey cast a swarm, I took its surplus cases and placed them over an empty brood-chamber—with starters—with a queen-excluder between the two apartments. Now if there chanced to be any uncapt brood in these upper cases the bees would sulk until they could cap over some kind of a cell and call it a queen, when the swarm would then abscond. Should there be nothing but honey in the combs, they will continue to sulk until something happens. The queen being caged, and the excluder removed, may cause the bees to behave in a vastly different manner, tho like a great many other things it does look that way.

Still, I cannot see why a colony that does not swarm shouldn't store as much honey as tho it did. Of course, if the swarm issues very early, and the season be prolonged, then the two may exceed what the one would have done. If we can gain for the colony without its having to swarm, that which it gains by swarming, then wherein does Mr. G.'s method have any advantage? I mean the desire and ability to build comb. Nothing so incites a colony to good work as the presence of newly-built comb in the hive. To obtain this vantage ground, a frame of foundation can be hung in the brood-chamber some little time to the giving of the supers, providing the strength of the colony and the state of the weather will permit. Place the frame of foundation between two combs of brood, and in due time follow this up with a super alternated with frames of comb and frames of foundation or starters. A half-depth case is always preferable for the first one given. Sometimes it works better to give a case of combs entire until they have been coaxt above, when this can be lifted and a section super placed between. It is always well to look to it that the queen be not in the upper case when raising it, for her presence there would work disastrously in that the capacity of the small frames would not be equal to the ability of the queen, which would tend to dissatisfaction; and her absence from the combs below would cause queen-cells to be started, and swarming would be the result. Arranged in this way, a colony can be run for both comb and extracted honey with the incumbrance of a queen-excluding honey-board.

The queen will not now pass the section super to again occupy the upper one, tho the queen-cells in this upper case must be taken away or destroyed as soon as they reach the proper age, or swarming may result just the same had they been built below. But how much easier done in the shallow-case than in the deep brood-combs, heavy with brood and honey.

You may say, Why not put on the excluder at the time the combs are given to the bees, and thus prevent the queen ever going there at all? Well, the point is to get the workers there as quickly as possible; and you all know that if the queen goes there honey will not be long in finding its way there. So when the case is raised and an empty one placed beneath it, the presence of brood tends to draw the *hive*-force away from the brood-combs, and lessens the tension there. The field-force will then get a hustle on themselves that tells you something is going to be done. O how they—the hive-force—then need air! Give it to them, plenty of it, and always from below. Nothing so causes the upward march of the bees to roll back upon the brood-combs as does the giving of cooling drafts of air from above.

I think that when thus managed bees will store as much honey as they will by the Golden method; and without the great danger (so it seems to me) of getting pollen in the sections.

I will here admit that I have never tried Mr. Golden's way, as he arranges and describes, but I intend to do so. Mr. Golden must use a small brood-chamber, and certainly his bees were not started off properly or they would not swarm with but one super partly filled.

I do not see it exactly, that by hiving a swarm in the double super you get such a large amount of honey that the bees otherwise would have used in building combs for the new hive and storing the same after they are constructed. Let's see. We will suppose a swarm is issuing, or has just issued; I need a few more extracting-combs, or that some I now already have are crooked or contain more or less drone-comb, all of which is tolerably new. I cut the comb out, save an inch or so next the top-bar. These frames are put into a shallow extracting-case, which case is then placed over a similar one tho empty; and the two constitute the brood-chamber to the hive the swarm is to occupy. On this I place a slatted queen-excluding honey-board, and then place the section-cases that were on the parent hive. The swarm is to occupy the old stand, the old hive is given a new location, but before doing this, a portion of the yet remaining bees are to be driven out with smoke. This so weakens them that there is little danger of second swarms. Contract the entrance, and shade the hive well. Now, see here, the presence of the empty super gives sufficient room till the fever subsides; the absence of old brood-combs causes the bees to gather less pollen for the first few days after being hived, and what they do bring in, the narrow strips of drawn comb will catch the most of it by the aid of the honey-board, for a bee cannot easily pass through the perforations with pollen on her legs. The brood-chamber is thus left for about a week, when the empty case is to be taken away, the other now being placed on the bottom-board. The hive may now remain till the honey season is over, or the colony may be re-united with the parent colony about the time the extracting-combs are completed.

All this has been done with only supers for a hive, the increase has been kept down, the extracting-combs have been secured, a few choice queens reared, and I think with as much really *marketable* honey as if the swarm had been treated according to Mr. G.'s method. However, I am open to conviction. If it can be shown that the bees *do not* store pollen in the section-comb while the super sits beneath the brood-chamber, then perhaps there is no quicker, yet profitable, way of disposing of a swarm. Scioto Co., Ohio.

Ipecacuanha for Bee-Stings—Figwort.

BY D. S. HEFFRON.

From the Popular Science News, of January, 1897, I take the following:

"A Calcutta physician who was attackt by a swarm of bees was severely stung on the hands, head, face and neck, no fewer than 150 stings being afterward taken from his neck. Fortunately he had some ipecacuanha powder with him which he immediately had made into a paste and smeared over the head, face and neck. The effect was most markt, preventing to a large extent the swelling and pain which invariably follow the bees' stings."

Ipecac, as we call it, is the powdered root of the plant of a light brown color, as fine as flour. It is kept by druggists, and is not expensive. The sting of bees used to pain me severely, and swell badly, sometimes closing an eye, or otherwise disfiguring the face. For the last season, tho stung more than a dozen times, I have escaped both pain and swelling by as prompt a use of ipecac powder as I could procure.

SIMPSON HONEY-PLANT OR FIGWORT.

If I do not mistake this plant, its botanical name is *Scrophularia nodosa*. Prof. Asa Gray says, in his Manual of Botany, it was "so called because a reputed remedy for *scrofula*;" while Prof. Wood says in his Class-Book of Botany, "So named from the resemblance of the roots to *scrofulous* tumors." Both the authors quoted agree in the description of the plant, in the form of the flower and fruit, its stem, leaf and habit. It is entirely hardy, found in Canada, the Middle and Western States, but rarely in New England. It is perennial, flowering the second year, and its habitat is along the edges of woods and in hedges, and in other damp and more or less shady places.

The writer has been acquainted with the plant that was recently figured in the American Bee Journal for 50 years, and never found it growing in an open, dry prairie. It begins to flower in July, and continues for about three months. But why should this old plant, introduced from Europe, be called the Simpson honey-plant? In an article in the Bee Journal of Oct. 14, 1897, the writer says: "I consider *one* acre of the plant worth at least *ten* of sweet clover." I have no competent personal knowledge. I think it may be worth testing in a small way. Cook Co., Ill.

No. 5—Recollections of an Old Bee-Keeper.

BY DR. E. GALLUP.

(Continued from page 51.)

I saw that the Langstroth movable-comb principle was correct at a glance, so that was how the Gallup hive came into existence. My hive was 18 inches wide, 12 inches from front to rear, and 12 inches deep. This was in conformity to my ideas of starting with a nucleus or a small swarm and controlling the animal heat with a division-board and building up to a strong colony by enlarging as the bees increast. The top-bar of the frame, V and all, was in one piece with shoulders cut for the end-pieces. The ends or sides of the frame were of the same width as the top-bar, and 3/16 thick; the bottom-bar was ⅜ square, nailed in corner up.

My reason for using so thin an end was that the bees would cluster clear past that, and the queen would occupy every cell, even those adjoining the wood, and by using the ⅜ bottom-bar the bees would build down and on to it, and if necessary past it, down to near the bottom-board. The only objection to this is, the bees are more liable to build onto the top-bar of the breeding apartment from the super combs.

I use my Langstroth frames with the ⅜ bottom-bar. I like a comb built solid to the frame all around. If we have a flat bottom-bar in wintering, even in this climate, there is an accumulation of bits of pollen, cappings from hatching brood, etc., that lodge on this bottom-bar and make a place for moths. Taking every advantage and disadvantage into consideration, I prefer the ⅜ bottom-bar every time. The only disadvantage is, the combs are a trifle harder to get out of the supers. Still, if we leave the flat bottom-bar in the super long enough for the bees to ripen and mature the honey, as it ought to be, we often find them as bad as the others. Now you have my reasons for modeling a Langstroth hive to suit my fancy.

Mr. Langstroth had the misfortune to have many agents that did not fairly represent him, and one in particular that cheated him out of a large percentage of his just dues. I had the supreme satisfaction of balking him in at least two of his schemes.

Along about this time in my bee-keeping, I obtained my first Italian queen, and along with her directions for rearing queens in small nuclei boxes, 4 by 6 inches, and of course went into rearing worthless queens with all the enthusiasm imaginable. After two seasons I found all was wrong from beginning to ending, so I studied up a far better plan.

Apout 1864 I sold out and moved to Iowa, and settled in Mitchell county, in an excellent locality for bee-keeping. The next question was, where to get a stock of bees to start with. The country was new and only partially settled, and no bees kept that I could hear of anywhere near. I finally obtained an old worthless colony 45 miles east, moved them home in midwinter, and put them in the cellar. In March I found a colony in a hollow tree, cut and moved them home, and sent off to Wisconsin for a queen, but did not receive her until July. In the meantime I had coaxt the old queen until she had a fair-sized nucleus. The found colony was a fair-sized one. I had transferred both in the spring.

After the first of July I built up to 7 good Italian colonies to put into winter quarters. Now I must tell of a mishap that came very near ending Gallup's career in this world:

I set the hives on a platform up over a pile of potatoes. One Sunday, along in the winter, while at dinner, I heard a crash down cellar, and on going down with a light found one end of the platform broken down, and five of the hives had slipt off and rolled down the pile of potatoes. The combs had nearly all rolled out, and were mixt promiscuously together on the potatoes and cellar-bottom. Well, I righted them up and placed the right number of combs in each hive, and then allowed the bees to crawl in as best they could. But I was stung fearfully. I would work as long as I could, then rush up and out into the cold air, brush off the bees, and back again. I bloated all up, turned a dark purple, and if I had not known what to do, I should surely have "past in my checks."

The remedy in such cases is a cold, wet-sheet pack. I have cured other cases in the same manner. One in particular, where the patient had become helpless and speechless. For a horse that gets badly stung, put on blankets wet in cold water, and pour on cold water. I cure rattlesnake bites, both in man and beast, by the cold-water process.

Well, I borrowed a great sight of trouble the balance of the winter for fear I did not get a queen in each hive, but good luck came in, and they were all right. So much for luck.

Orange Co., Calif.

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Something About Queens—Stopping Robbing.

BY C. B. ELLIOTT.

While I am somewhat a novice in apiculture in Colorado, I have been noting with much interest the articles of Dr. E. Gallup and others on establishing a standard for queens—see page 660 (1897). All I shall speak about is my own experience. I give it for what it's worth, and there may be some points in it worthy of consideration.

The last week in September, 1896, I by chance found queen-cells in one hive that for some reason had lost their queen. For fear the young queen might be lost in mating, I took out one cell and gave it to handful of bees in an American hive, which was full of honey. I did this simply to be on the safe side in mating. The colony rearing the queens was rather weak.

On Oct. 3 to 5 I found both queens had hatcht about the 15th, both to my surprise laying. Now, what to do with both queens was the problem. As the handful had plenty of honey, I decided to let them chance it. I do not think there was one pint of bees.

To my surprise, about Jan. 1 the handful of bees was about double in size, and the queen was still laying. There was brood in three frames. Monthly, from then on till spring, I watcht them. She was laying continuously, gaining ground all the time, and by June they were one of the strongest colonies I had, out of 190, spring count. This colony produced as much, if not more, honey than any other I had. By an oversight I failed to keep track of the number of supers filled by them, but as nearly as I can tell it was eight or nine. They did not swarm during the season. I kept three to four supers on all the time. They still would hang out of the hive, as all could not get inside.

The sister queen I lost track of, as I buncht my hives together for wintering, and would have known nothing about this one had she not been in an odd hive with a handful of bees, and keeping track of them through curiosity.

I am now experimenting with 10 October queens, started laying about the 15th; now they have a nice lot of brood. The 10 colonies are all weak. I started into the winter with 354 colonies, all with plenty of honey, and all strong, with the exception of the 10 mentioned.

HOW TO STOP ROBBING.

I noticed an article on stopping robbing. My plan is this, and it is effectual: Close the hive all but a half inch, or such a matter, then every few minutes sprinkle or spray the front of the hive, bees and all, with a strong solution of salt water. The water should be quite briny. Don't fear, it won't hurt them, but on the contrary it will do them good, and will stop robbing in a short time.

By the way, I spray my bees fall and spring, with salt water quite strong, about a half teacupful to the hive. I raise the cover and spray down, and I don't believe you can find a livelier lot of bees anywhere than we have. Also during the summer, if I find a colony not doing as they should, I treat them to a dose of salt water.

Arapahoe Co., Colo., Nov. 2.

BIOGRAPHICAL

JOSHUA TERRY—A UTAH PIONEER.

[The following biographical sketch was kindly sent us by Mr. Terry's friend—and our friend, too—Mr. E. S. Lovesy, President of the Utah State Bee-Keepers' Association :—ED.]

Joshua Terry came to Utah 50 years ago. He is one of the few now living, of that noble and honored band of the long ago. He is one of those who received the homage of a grateful people in our jubilee year of 1897. Mr. Terry says our grand jubilee, in bringing together old faces, old friends and acquaintances, made him feel for the time being almost as if he were again living over again those eventful times of 50 years ago, when they traveled over one thousand miles of a trackless wilderness and settled here on what was then known as the Great American Desert. But they formed the nucleus that has now grown into a great State.

Joshua Terry was the son of Parchall and Hannah Terry, and was born in Home District, Canada, Aug. 11, 1825. When he was 13 years of age he moved with his parents to Sheridan Co., Mo., and from there he moved to Illinois, where he followed farming for five years. He then went to Iowa, and from there to Utah in 1847, and settled with his parents at Draper, on a very fertile plat of land near the base of the Wasatch mountains about 20 miles south of Salt Lake City. But having formed an acquaintance with some mountaineers in crossing those wild plains where the States of Nebraska and Wyoming are now located, and being then a young man about 22 years of age, with a strong, robust constitution, and a romantic turn of mind, of a roving disposition, he determined to push out into the wilds of what is now a part of the State of Wyoming, in the vicinity of the headwaters of the Green river, a section of country then virtually unknown to white men.

For ten years he lived as a hunter and trapper, trader and mountaineer, in those mountain wilds with an old, trusty Delaware Indian as a friend, and sometimes accompanied by other white men. The thrilling incidents told by Father Terry of his many exciting adventures and narrow escapes causes the blood to tingle in one's veins, and almost makes one feel that the same scenes were being enacted over again. It is almost certain that only for this tried and true friend, the Delaware Indian, Father Terry would not be with us to-day. In rehearsing those wild and trying scenes, enacted nearly 50 years ago, we find that it was then, as it is now, man's greatest enemy was man, and wicked men roamed those mountain wilds; and the more an honorable man became possest of this world's goods, the greater was the schemes of unprincipled enemies to get possession of it. As the old adage goes, that dead men tell no tales, thus we see that in many instances those cruel enemies of mankind would sooner take the lives of their victims than to spare them. Thus many lost their lives for what they possest. Of course, many of the red men lookt upon all white men as their natural enemies. Thus, we see that their lives were often in extreme danger. For this reason they always had to carry their rifles with them for protection, and they often lay down with them in their arms. They would often camp ostensibly for the night, build a fire, cook and eat supper, then replenish the fire and travel many miles over a mountain or across a valley before camping for the night; and then no matter how inclement the weather, Mr. Terry says that on those occasions they dare not for their lives light a fire unless they found a cave or hole in the rocks where the fire could not be seen. By this and other stratagems they many times saved their lives. Sometimes their enemies would rush on them as they thought, only to find that the birds had flown to parts unknown.

After ten years of this venturesome, risky life, his old Indian friend died, and Mr. Terry returned to Utah, and settled at the old homestead. He married Miss Mary Emma Reid, an estimable lady of Draper, Jan. 20, 1857. Fifteen children have been born to them, 8 of whom are still living; and from that time till now he has been extensively engaged in the bee-industry, farming and fruit-growing. Some years ago Mr. Terry is said to have owned the finest orchards in Utah.

In 1870 Mr. Terry imported 200 colonies of bees from California, at a cost of $2,200, or $11 per colony. During the winter 50 of them died, causing a loss of $550. But by thrift, energy and perseverance he has made a success of the bee and fruit industries, and also of other pursuits in life. We sincerely wish him yet many years to enjoy the fruits of his labors.

E. S. Lovesy.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Was the Colony Queenless?—Combs of Honey for New Swarms Next Spring.

1. On Jan. 1 I sold a colony of Italian bees to a neighbor, he to furnish the hive. On a warm day I lifted the frames of bees out of my hive and into his; on doing so I discovered by one frame that they were queenless, and altho I did not search for the queen I united them with another colony. Was I right in calling them queenless?

2. In the fall having more colonies of bees than I wanted, I killed four colonies by the sulphur plan, and I now have the combs of honey; they are nice, straight combs, well filled with honey, but the honey is too dark to eat. Can I utilize them by giving two or three frames to each new swarm in the spring?

California.

Answers.—1. Can't tell for certain. If the drone-brood was only in drone-comb, it is just possible they were all right. If it was more or less in worker-comb, they either had a bad queen or laying workers.

2. Yes, your plan will work all right. Keep the combs where the honey will not granulate.

How About Bees Under Snow?

What danger is there of bees smothering under snow if the entrance to the hive should not be opened? Some contend that they will smother, while others say no, and the snow is a help to them.

Colorado.

Answer.—Testimony is somewhat conflicting, as you have found. That's probably because results have been different in different cases. One man finds his bees come out in the best condition after having been buried completely by snow for a certain period. Another, with some change of circumstances, finds his bees ruined. In one case the bees have been covered in such a way, and the temperature has been such, that the bees have had all the air they needed, and the bees have remained at that temperature that allows them to be most nearly dormant. In another case snow has thawed and afterward frozen so as to close the entrance and smother the bees. In still another case the bees have been buried under a deep bank, where they have remained a long time, the snow gradually receding from the hive and leaving an open space, the air coming through the surrounding snow in sufficient quantity for their needs, and the bees have been kept very warm. They start brood-rearing on a pretty large scale, become too active, and diarrhea makes bad work with them. Better not put too much trust in a snow-bank, as yours might not be one of the very successful cases. At any rate, better not leave the entrance closed too long.

Dividing Colonies—Stimulative Feeding, Etc.

1. How early in the spring can I commence dividing?

2. What time can I commence feeding sugar syrup for stimulating, as I wish increase of bees?

3. Can I take queen-cells from frames, and after putting them into queen-cell protectors with spiral cages, fasten them in the combs of the same colonies until I need them, when I commence to divide? I have six colonies, and wish to increase six or more, if the plan would work all right, and save sending south for queens.

Kansas.

Answers.—1. That depends mainly upon the strength of the colony, and you will find that in general colonies will not be strong enough to divide profitably till about the time of natural swarming. That may come in May or June in Kansas. Of course, you could divide in the first part of March, but it would be a losing game.

2. You may begin stimulating as soon as it is warm enough for bees to fly freely every day. But don't count on too big a gain in that way, and you may not be so much disappointed.

3. You are not likely to make the plan very successful. The virgin queens will not be very well received after being caged some time, unless the bees to which they are given have been queenless for some time. Better try it on rather a small scale.

Wintering—Catnip Honey—Early Queens from the South.

1. When bees are prepared for winter on their summer stands, and they are quiet, are they all right? If they are not altogether quiet, is there something wrong with them? (Of course the hives all have ventilation.)

2. How long may these same bees stay in their hives without a flight and come out all right in the spring?

3. If you were to sow a small piece of ground (say an acre) for bee-pasture, what would you sow?

4. What kind of honey does catnip yield? Some special honey came into my apiary last summer, and I thought it might be catnip. I thought of sowing a piece in the spring to test it. If your answer condemns it, I shall not sow.

5. What is the earliest that I could have queens shipt to me in the spring, and have safe shipment?

Illinois.

Answers.—1. If they are not dead, and if they are perfectly quiet, they are probably all right. But they may be all right without being altogether quiet. If you go to a strong colony to-day that is so quiet that you can hear no noise whatever by putting your ear to the hive, and if the thermometer sinks or rises 10° to-night, you will not find it so quiet tomorrow.

2. It would be a rare case if it came out all right after five months of confinement. The chances would be greatly increast if the confinement were only four months. Some would stand it that long, some wouldn't.

3. That would depend upon circumstances. It would hardly be anything that had no other use except for honey. If no buckwheat were grown in the neighborhood, and if the bees had nothing else to work on at the time buckwheat yields, that might be the best thing. For most places probably sweet clover might be best.

4. I don't know what catnip honey is like. I saw a fine piece of catnip years ago beside the apiary of Jesse Oatman, but I think it was not considered sufficiently profitable to continue.

Unless you have a large family of children of tender years for which to provide catnip tea, I doubt whether it will be advisable for you to use anything for waste land for its occupation.

5. Probably you could have them safely shipt from the south as early as you would be likely to want them, say in April.

Drones—Transferring Bees.

1. If I use full sheets of foundation in every frame in each hive will there be drones enough to supply the apiary? If not, what ought I to do?

2. The colony I wrote you about feeding are doing all right so far. They are in a log 20 inches long, just as I brought them from the woods. If they get through all right, I want to transfer them to a hive. What time would be best, before or after the first swarm comes out?

3. I have one colony in a log that had plenty of honey of their own gathering when I put them into winter quarters. At what time would it be best to transfer them? I want to increase as fast as it is profitable.

4. How late in the fall would it be safe to transfer from a log to a hive with eight frames filled with full sheets of foundation, and properly packt and left on the summer stand?

5. What is the proper width for the alighting-board? Why?

6. How would you transfer a colony from a log to a hive?

MICHIGAN.

ANSWERS.—1. Don't worry. You may do your best to keep down drones and the bees will probably rear a good many more than are needed. If you feel the least anxiety, just break out an inch square from one of the combs and the bees will fill the gap with drone-comb.

2. You can transfer them in time of fruit-bloom, and perhaps with more satisfaction three weeks after swarming.

3. Either in fruit-bloom or three weeks after swarming.

4. If you mean to feed them, it might be done early in September. If you expect them to lay up their own stores, it depends altogether on the pasturage. If nothing but white clover, it might not be safe some years after the middle of June, while other years it might do a month later. If they have plenty of fall flowers, they might fill up after the first of September. Your safe plan will be to take them early.

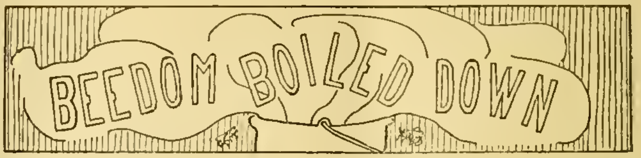
5. That's a matter about which there is no fixt law; 15 inches is a good width, because it gives the bees plenty of room for a front porch, and keeps weeds from growing up in the way. Two inches is a good width, because it is not in the way so as to split off. Perhaps a still better way is to have the bottom project about three inches for an alighting-board, and then have a loose board lying in front.

6. Follow the directions given in your bee-book for transferring from a box-hive, using your judgment for what variation must take place to fit the particular log in hand. Perhaps you'll do well to saw up as close as possible to the combs at each end, then drum out the bees, and split the log in two at that part which you think will break the fewest combs.

Complete Volumes of 1897.—We have on hand about 40 complete volumes of the American Bee Journal for 1897, which we will mail to any one upon receipt of 60 cents. We also have about the same number of the first six months' copies of 1897, which we will mail for 30 cents. As there were 832 pages of the Bee Journal last year, here is a chance for our new subscribers to get a good deal of valuable reading-matter for a very little money. Better order at once, before they are all gone.

A New Binder for holding a year's numbers of the American Bee Journal, we propose to mail, postpaid, to every subscriber who sends us 20 cents. It is called "The Wood Binder," is patented, and is an entirely new and very simple arrangement. Full printed directions accompany each Binder. Every reader should get it, and preserve the copies of the Bee Journal as fast as they are received. They are invaluable for reference, and at the low price of the Binder you can afford to get it yearly.

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.



Uniting Colonies.—The Bee-Master says instead of gradually moving together weak colonies to be united, unqueen the colonies to be moved, 11 days later destroy queen-cells, and 2 days later they'll stay where put. Or, remove queen and all brood, and unite two days later.

Brood-Rearing in Winter.—Doolittle says in Progressive that Quinby was correct in saying that brood-rearing would commence in all good colonies about Christmas, but that meant in colonies wintered outside. In the cellar, with perfect wintering, there is rarely any brood when set out in April.

The Pettit Comb Honey System.—The A. I. Root Co., in connection with the fence separators, propose to make use of the Pettit plan, by having a fence between the outside rows of sections and the sides of the super. S. T. Pettit thinks this will not be so good as his "dividers" with ⅜ holes, for with sufficient space between the slats the sections will be made ridgy.

Honey in Kongo.—W. Housiaux says in Progres Apicole that in Kongo honey is used as fresh as possible, as it sours in a little more than a week. As Kongo lies under the equator the continuous hot weather favors souring, but it must be pretty thin stuff. It is used under different forms, in cakes made of bananas and rice, but usually in place of sugar with rice.

To Hasten Laying of Hens.—The Bulletin Horticole de Liege gives as a condiment to hasten the laying of hens the following: 6 parts honey, 3 parts flour, 1 part wood ashes. Warm the honey and stir in the flour. When cold beat well. Spread the ashes thinly on a molding-board, and roll on it the paste till the ashes are absorbed. The ashes may be replaced by ground pepper or ginger, and lime may be added.

Average Yield Per Colony.—Doolittle says that in the last seven years of the 70's his average yield was 106 pounds, nearly all comb honey, in one year 134 pounds; and in 1877, 166⅔; one colony giving 309 pounds comb, and one of the two workt for extracted giving 566 pounds. But the woodman's ax and the farmer's plow have brought down the average of the past five years to 70 pounds.—Progressive Bee-Keeper.

Keeping Honey.—Not only is it necessary, says Doolittle in Gleanings, to keep honey in a warm, dry room, but it must have sufficient ventilation to carry off the moisture from evaporation. Soured honey may thicken in such a room, but it will never be as good as new, especially in sections. Sections of honey placed near the floor will not have so good a chance as those higher up, so it is well to have a platform a foot above the floor.

Strap-Iron Frame-Spacers.—These are pieces of strap-iron 2½ inches long, let in perpendicularly into saw-kerfs in the end-bars. They are meant to be an improvement on the Hoffman frame, and the editor of Gleanings calls attention to them as used by W. F. Marks, to avoid the propolis of the regular Hoffman. The same thing has been in use for some time with others, and it is likely that it has been originated in more than one place.

The California Foul Brood Law.—This law has been chased down by the Pacific Bee Journal after a long hunt, and it seems it has been in existence about 15 years. It authorizes the Board of Supervisors of any county to appoint an apiary inspector and fix his pay. If any one complains to the inspector that foul brood exists in a certain apiary, the inspector must visit such apiary as soon as practicable, "and direct the person in charge thereof to destroy all hives ascertained to be so affected, together with the combs and bees therein, by burning or burying; the same to be done the following night." A section that the editor thinks is known to but few, directs that any one owning or having charge of an apiary who finds out in any way that he has a case of foul brood, must destroy the hive, bees and combs under penalty of $5 to $25 for the first offence, and not more than $50 for each subsequent offence.

Little to Learn.—A letter in British Bee Journal from Mr. Hooker, who is visiting in or near Philadelphia, says: "From what I have seen and the conversation I have had with bee-keepers, who have been most pleasant and communicative, I think we have little to learn from our American friends as to management, etc. They have, however, a much longer honey season than we." Maybe neither side could learn from the other, and maybe either could.

Moths Eating Colonies.—Doolittle took Aikin to task in Progressive for saying something about colonies being attackt by worms or moths, and D. L. Tracy comes to the rescue and says moths don't have such power in Colorado, but in Iowa he has seen the moth literally eat up a colony that was lively, with no sickness or languishing; "10,000 bees to the frame, and 10 frames to the hive, yet the moths completely annihilated them." Won't that make Doolittle gasp?

Winter Food.—A. S., in British Bee Journal, says that after having fed tons of sugar syrup, feeding in all sorts of ways, he is forced to the conclusion "that the best course, with regard to feeding, is to avoid it altogether, by leaving the bees sufficient natural stores to last till honey comes again," whenever this can be done. He says: "Again and again has it been made plain to me beyond dispute that colonies requiring no spring feeding are ready for work in supers before those that are fed in the most careful and judicious manner."

Development of Foul Brood.—P. Beuhne says in Australian Bee Bulletin that Mr. McEvoy is right, that perisht brood will develop foul brood, *if* he should add, germs are present. He thinks there is no occasion to be at cross purposes with scientists, who contend that no foul brood can develop without germs. No use ignoring the fact that nothing can spring from nothing, and where there are no germs no amount of rotten brood will develop the disease, while in places where germs exist neglected brood makes disease more liable to develop.

Bees and X-Rays.—Henry W. Brice, a bright writer in the British Bee Journal, refers to Roentgen's discovery, and thinks it possible that bees make use of rays invisible to human eyes. How can bees come out of the absolute darkness of a hive's interior and fly without hesitation, when a human eye would be blinded by the sudden change? What power of vision enables bees to work with such beautiful accuracy in complete and utter darkness? Does the queen utilize the X-rays to allow her to see through the wall of wax, so as to place her eggs exactly opposite those laid on the other side of the comb?

"**The Alcohol Test** is a very simple one for detecting the presence of glucose in honey. Glucose seems to have an affinity for alcohol; and when a small amount of the latter is poured over the surface of the mixture the glucose will send up little threads and balloon-like bubbles into the alcohol. Alcohol placed upon the surface of pure honey creates no agitation whatever." So says John H. Martin in Gleanings among items in his "California Echoes." So much has been said that is false with regard to testing with alcohol, that this test will probably be fully tried before entire dependence is placed upon it.

Prevention of Swarming.—Lacoppe-Arnold in Le Rucher Belge says the following plan has been successful with him: Take from the hive all the frames with adhering bees, and put them in an empty hive. Then brush off all the bees at the entrance of the old hive, and as fast as they are brusht off put them back in the old hive, first removing all queen-cells, in place of two of the frames, however, putting in frames of foundation. Then add the super. When he had done this, he says the bees were completely disconcerted. They found combs to build, plenty of room, and the next day killed the drones and gave up all notion of swarming.

The Bee-Space.—Hardly a farmer was without bees in the neighborhood of F. Greiner when he first commenced bee-keeping, as he relates in Gleanings—soap-boxes, barrels and nail-kegs being among the hives used, and bees were kept rather successfully as to wintering as well as to producing honey. After he sold them new-fangled hives and transferred the bees, one after another of the old bee-keepers dropt out of the ranks and converted their hives into kindling-wood, until he was left practically possessor of the field. He thinks the bee-space was to blame for this, as bees would not winter in frame hives with the same care that was sufficient for box-hives. The lesson seems to be that while with proper care bees may winter in frame hives even better than they formerly wintered in box-hives, yet for those who will not give them that care, and who make no especial use of the advantages offered by movable frames, box-hives may be more profitable.

Queen Introducing-Cage.—Take the lid of a tin can, cut a large hole in the top, put a piece of wire cloth inside, and fasten it there neat and flat with solder in three or four places around the edge. Place the queen on a comb where there are empty cells and some honey, place the cage over, press lightly, turning the cage to right and left until it cuts in deep enough to stay, then hang the comb in the center of the hive. Next day make a hole through the comb at the back side with a lead pencil, daub honey on the outside of the hole, return it to the hive and the bees will do the rest. If the queen isn't valuable the hole in the comb may be made at the time of changing the queen. This plan is given in the Australian Bee-Bulletin by W. Reid.

Tall vs. Square Sections.—Of 2,000 sections put on 16 colonies, half were Danzy sections and the remainder square, says B. F. Onderdonk in Gleanings; 728 of the Danzy sections were finisht, and 468 of the square sections. The Danzy sections were an ounce heavier than the square, were glazed at a cost of 1⅛ cents each, and brought 7 cents apiece more than the square ones with cartons and no glass. That for white clover. A rather curious circumstance is that while there was only ½ cent difference between the white and fall honey in the square sections, the fall honey in the Danzies brought 4 cents less than the white sections, which brought 20 cents each. Rather has the appearance that the shape of the section, or the glazing, or both, had something to do with getting a fancy price for the tall sections.

50c worth of Books for 1 new Name.

Send us $1.00 with a new name for the Bee Journal for 1898, and we will mail you your choice of the list below, to the value of 50 cents.

We make this offer only to those who are now subscribers; in other words, no one sending in his own name as a new subscriber can also claim a choice of this list:

50 copies "Honey as Food"	50c.
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☞ See "Bee-Keeper's Guide" offer on page 43.

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EDITORIAL COMMENTS

Indiscriminate Copying from other papers than bee-periodicals has its dangers. A bee-paper which contains much valuable matter has an article, probably copied, in which it is stated that the drone which meets the queen dies in mating, "his organs being torn from him, and remaining in the body of the queen, forming what is called the spermatheca." The last six words could hardly be written by any one at all familiar with bee-matters, and the editor should be more careful in clipping.

◆

The California State Convention.—Prof. A. J. Cook, now ex-President of the California State Bee-Keepers' Association, has very kindly sent the following paragraphic notes regarding the recent meeting and some of the visitors present:

The California State Bee-Keepers' Convention, held in Los Angeles, Jan. 10, was a very pleasant meeting. We were greatly honored in the presence of Mr. Thos. Wm. Cowan, of England, editor of the British Bee Journal, and Mr. W. L. Porter, of Colorado.

The subject of two Unions was discust, and all felt that there should be but one Union; and that the one last formed was to be preferred, in that it stood ready to attack any and every evil that confronts bee-keepers. A vote expressing the above was unanimous. It was the opinion of all that adulteration of honey is now our greatest enemy, and should receive no quarter. A national pure food law was stoutly advocated.

The work of the Bee-Keepers' Exchange was praised. It is a general opinion that this organization is very desirable. It is to be hoped that it will receive the aid and support that it deserves.

Mr. C. A. Hatch, formerly of Wisconsin, was elected President of the Association, and Mr. J. F. McIntyre Secretary. With such officers the California State Bee-Keepers' Association will surely prosper.

Mr. Cowan recently addrest the large farmers' clubs institute, and the students of Pomona College, on the relation of bees to horticulture. This address is a very valuable statement of most important truths. It should be heard by all our people. A. J. COOK.

◆

Dr. Besse's Sweet Clover Lawsuit.—We have received the following from Dr. H. Besse, of Delaware Co., Ohio, dated Jan. 18, in reference to his suit against the township trustees who cut down a field of sweet clover just as it was about to be valuable for his bees:

MY DEAR MR. YORK:—As I promist to keep you informed in regard to my lawsuit, I take the present opportunity to inform you the jury found in favor of the defendants. This was a surprise to nearly every one present. The court house was crowded during the two days that the trial continued (last Thursday and Friday). I think that the jury were much prejudiced against sweet clover, as the defendants' attorney claimed that I had sowed sweet clover seed along the roads all over the country, and it was such a *nuisance!*

And further, that I had not rented the field on which the clover was of the legal owner, who was my wife, altho she has been in peaceable possession for the period of 24 years, or since the time her first husband died. My wife has one son now living, but was in the far West when his father died. Then in a few weeks after his father died he came home, and staid about six weeks, when he returned West and was changing from one place to another, and in a few years stopt writing to his mother, and for 16 years she never heard from him, until in 1893, when she found that he was living in New Mexico, and wrote him to come home, which he did in February, 1896. When he last left home he left the farm in his mother's care, and she never had her dower set off. Now, the sweet clover was sown the year before he came home, and he found no fault about the growing of sweet clover on the farm until I sued the trustees, and that made him very angry with me, as well as with his mother. You see, the defendants claimed that when my crop was destroyed, the ground was not under my wife's or my control, and the son and trustees had the right to destroy my crop. I think that they had no more privilege to do so than they would have to destroy a field of wheat.

My attorneys have made a motion for a new trial, and if the *Unions* stand by me, I will push it as long as they will assist me. I think that we should not surrender at this stage of the fight. Very respectfully yours,
H. BESSE, M. D.

◆

Feeding Sweet Clover to Farm Stock.—We believe in giving both sides of a question when there are two sides. It seems from the following that "locality" has quite a good deal to do with the eating of sweet clover by farm stock:

MY DEAR MR. YORK:—On page 25 I notice your editorial regarding Prof. Cook's statement with reference to sweet clover being "worthless for anything except bees." I fully agree with him. There is a great deal of both the white and yellow varieties of sweet clover around my home, but not one of the animals on the place will touch it. I have tried feeding it in its various stages—young, old, fresh, dry, cut and growing. In the early spring before the other pastures are fit for use, one would naturally suppose cattle would be crazy for green food, but they wouldn't touch the sweet clover. They would sniff at it, look at me so sorrowfully and say as plainly as an animal can, "Say, what yer givin' us? Aren't you heartily ashamed of yourself for offering us this kind of stuff to eat?"

This matter of feeding sweet clover was not given up after a few trials, but after many, and during the last few attempts I was so ashamed that I couldn't look the animals in the face. My stock may be very peculiar and particular—about that I don't know, *but I do know they simply will not eat sweet clover in any form.* I have no goats—*they* might eat it.

Prof. Cook being askt for his opinion regarding its feeding value, could not answer contrary to what his experience had been. If you will remember, at St. Joseph during the convention of the North American Bee-Keepers' Association, this matter was discust pro and con. That discussion was what prompted me to make the trials. This question was also freely discust at the Nebraska bee-keepers' convention held in Omaha two years ago, in which discussion both sides were presented.

To be sure, stock may be starved until they will eat anything that will answer for roughage, but I suppose we are all talking about stock that is kept in an intelligent manner. A week or two ago I took a cow out of the barn and picketed her in a place where there was dead grass and also a lot of fresh, green, young sweet clover. She ate the dead grass all right, but wouldn't touch the sweet clover.

The white variety of sweet clover is excellent for bees, but they don't seem to care much for the yellow variety here.

Yours truly, LOUIS R. LIGHTON.

Douglas Co., Nebr., Jan. 14.

We believe it would be a good thing to have a few more testimonials on this subject, from those who have had actual experience with sweet clover as a fodder plant. Perhaps Mr. Wm. Stolley, of Hall Co., Nebr., can give some new light on this matter. He has had large experience with sweet clover for hay, and doubtless can tell how to educate stock so that they will eat it the same as the other clovers.

◆

California Bee-Keepers' Exchange.—Ex-Secretary John H. Martin sends us the following report of the late meeting of the Exchange:

At 2 p.m. Jan. 11, the Bee-Keepers' Exchange was called to order by Vice-Pres. C. H. Clayton. The Secretary read the minutes of the last annual meeting, and the minutes of all of the meetings of the Board of Directors and Executive Committee, which were approved.

Mr. Clayton reported upon the financial condition of the Exchange, which showed favorable progress when we consider that the first season was a failure in honey-production, and this season the markets have not demanded honey as in former years.

The present Board of Directors will hold over until another year, or until a special meeting is called.

The present Board of Directors met with Vice-Pres. Clayton in the chair. J. H. Martin, who has served as Secretary, owing to poor health and the fact that he never felt himself qualified to handle the honey proposition, desired to retire from the office, whereupon C. H. Clayton was elected Secretary and Manager. R. Touchton was elected Vice-President, and J. H. Martin one of the Executive Committee. The Board then adjourned.

◆

Something About Marketing Honey.—Mr. Wm. A. Selser is a bee-keeper who has also had much experience as a honey-dealer in Philadelphia, Pa. He has kindly written the following advice, which he feels ought to be heeded by at least the more extensive bee-keepers, if they wish to realize the most from their honey crops:

The late arrivals of California honey has demoralized our market. As fancy white comb honey as I have ever seen is selling at 10 cents a pound. I have urged the bee-men for years to ship their honey to the city markets early in the fall. All honey should be marketed before Thanksgiving. History repeats itself every year, and I am getting letters every day from Eastern bee-keepers who want to sell their crop at any reasonable offer. The result is, they can't compete with California, and they will carry their crop over or sell it through a commission house at a few cents a pound.

The reasons are obvious. Commencing in August the California Exchange and shippers offer through the brokers (of which each Eastern city has an immense overstock) their honey in car lots. The wholesale grocers, the bakers and dealers take hold, and car lots are arriving continually till about Dec. 1, when these buyers all get filled up. Then California realizes the outlet in this direction is closed, and then the damage begins by their shipping car lots to these brokers and commission men, drawing on them for half the value of shipment, and the receivers paying the freight. These brokers and commission men finding the car-lot buyers filled up, after holding it a few weeks and being out of the money they have advanced, they sell it out in small lots to the retailers at any reasonable offer.

I have again and again insisted on the bee-men selling their honey in September, October and November, before such conditions of affairs begin. Yet every year after Jan. 1 bee-men wake up to the fact that they have a big crop of honey on hand, without any prospect of selling it.

I do not sell honey on commission. I have a number of apiaries under control that produce for me all the honey I can sell, and in giving the above facts I have no interest except for the good of the honey-producer. WM. A. SELSER.

THE WEEKLY BUDGET

MR. JOHN BAGSHAW, of Ontario, Canada, wrote us Jan. 24:

"Keep at the dishonest commission men and adulterators. We are all with you."

MR. C. THEILMANN, of Wabasha Co., Minn., writing us Jan. 24, said:

"The weather is fine, but no sleighing. Bees are seemingly wintering well."

MR. JOHN H. MARTIN (Rambler), of LosAngeles Co., Calif., writing us Jan. 22, said:

"We are having continued dry weather, and the prospects are not flattering for a flow of honey during the present year."

MR. LUTHER S. HILDRETH, senior member of the firm of New York honey-dealers—Hildreth Bros. & Segelken—died Jan. 17. We are informed by Mr. Henry Segelken the business will be continued as heretofore under the same firm name, and without change of capital.

MISS GRACE PRINGLE—daughter of the late Allen Pringle, of Selby, Ont.—in a letter written us Jan. 24, said:

"Mother and I are making arrangements to leave the farm in March. I have given the most, or, in fact, all my bees out on shares."

REV. L. J. TEMPLIN, of San Diego Co., Calif., writing us Jan. 10, said:

"This is the first day this winter that my bees have not been able to fly and gather both nectar and pollen. Their sources of supply are orange, lemon, pepper and eucalyptus trees."

ROSE KENNICOTT, of Delta Co., Colo., when sending us her membership fee for the United States Bee-Keepers' Union, wrote:

"I have made a success of bee-keeping, managing 250 colonies with no other knowledge than that I have gotten from always doing what the American Bee Journal advises."

MR. A. W. HART, of Stephenson Co., Ill., was the victim of *heart*less and almost *hurt*ful errors on our part, which appeared on page 45, where we printed his name H-*u*-r-t instead of H-*a*-r-t. We also put him in Will county in place of Stephenson. We beg his pardon, and trust that we will not soon have the "Hart" to "Hurt" him again; nor to move him from one county to another.

CATALOGUES FOR 1898 have been received from the following, who patronize the advertising columns of the American Bee Journal:

Interstate Manufacturing Co., Hudson, Wis.—Bee-Keepers' Supplies.

F. A. Crowell, Granger, Minn.—Queens, Bees, and Bee-Keepers' Supplies.

R. H. Schmidt & Co., Sheboygan, Wis.—Bee-Keeper's Supplies.

The A. I. Root Co., Medina, Ohio.—Bee-Keepers' Supplies.

MR. ALBERT VOUGHT, a bee-keeper in East Carroll Co., La., writing Jan. 15, reported the arrival of a fine 8-pound boy who fully intended to make his permanent abode with them. Mr. L. W. Trumbull, of this (Cook) county, called recently, and he also informed us that a son had come to brighten their home. We sincerely congratulate these fellow bee-keepers on their good fortune, and only wish that our two dear babies, that came to us within the past three years, could also have remained with us. But as they were both taken we can only rejoice with others who are more fortunate, for we have been assured that they with many others sorrowed with us in our losses.

CONVENTION PROCEEDINGS

Report of the Northwestern Bee-Keepers' Convention, Held in Chicago, Nov. 10 and 11, 1897.

REPORTED BY A SPECIAL BEE JOURNAL REPORTER.

(Continued from page 58.)

FIRST DAY—Evening Session.

DRAWN COMB.

"What is drawn comb?"

Pres. Miller—Any comb made by the bees is drawn comb. That is all there is of it. I don't know why it should have that attacht to it, and yet of late it has been used quite often. If you have comb made by the bees, it is drawn comb. If any have any amendment to the definition I would like to have it. Drawn comb and drawn foundation are two different things. If no one has an amendment, we will pass to the next queetion.

PACKAGES FOR RETAILING EXTRACTED HONEY.

"Which is the best and cheapest package of 10 pounds for extracted honey?"

Dr. Besse—A 10-pound pail.

Pres. Miller—Has any one any other package to suggest than a tin package?

Mr. Schaper—I have purchast 100 wide-mouth stone-jars, also crocks; their cost is about eight cents apiece by the hundred.

Pres. Miller—What will be the cost of the tin ones?

Mr. Baxter—Ten cents a piece, they cost me. I sell the whole thing, and if they are returned all right; if they empty it out I take so much off. I sell it at 15 cents a pound on the market right along. This year I didn't extract any.

Pres. Miller—Mr. Schaper has the advantage in the matter of price if his package is as satisfactory as otherwise. The question probably would come in as to whether the stone package would be considered as desirable to the customer for use afterwards; that is a thing we must always consider.

Mr. Rohrs—I have bought this year different sizes of tin pails; some were five pounds, others seven, others about 14 and 14½, and if I remember correctly they cost me, on an average, about 6½ and 7 cents. They have only a plain cover, and as I ship my honey to friends who distribute them among their friends, I like these little packages; they were packt in a box and the board was nailed pretty close, some tight, some not. Some boxes arrived at their place of destination dry and clean, and some of them with nearly all the contents gone, and so I ask, Will that lid close tight enough to prevent leakage? I want a pail where I can take off the cover, because if I show the honey to a customer, I want him to see the stuff I want to sell him, but if I have a tin screw on top, about an inch and a half in diameter, they cannot look into the pail, and I cannot show them what is in there. I should prefer this common pail that I can take off the cover, but want a lid that will close tight, so that in shipping if it is turned upside down no honey will leak out. I see that Mr. Dadant says if he seals it with wax and rosin mixt, when it is warm, it will not leak.

Pres. Miller—Will Mr. Baxter tell us something about the Dadant pail, the circular of which he has handed me?

Mr. Baxter—I consider that the best package for granulated honey. For liquid honey I don't know of a good package on the market. You can turn it upside down or anyway if granulated. For the home market this will do very well, because you can take the lid off, but if you want it shipt away it has to be made so it won't leak. The way I do, I take a piece of wax and tallow and heat it, and invert the bucket into the melted wax and take it out quick, and the wax will adhere all around the rim of the bucket, and the lid will be tight. That is my method, but it is a great deal of work. I know of no package that fits so tight but what the extracted honey will leak out when it is inverted. There are some, I know, but they are not desirable because, first of all, they are very costly, and the shape and so on are not what we want.

Mr. Wheeler—I know of two or three packages that fill the bill very well for me. There is a can made with a 4-inch screw cap, similar to the 60-pound can cap; they hold 12 pounds. It has a little wire handle on top about three inches long. I don't know what that size costs, exactly, but I should judge not over a shilling.

Mr. Whitcomb—I doubt whether there is anything better for the purpose than a half gallon screw-top can.

BEST RETAIL PACKAGE FOR CITY TRADE.

"What is the best retail package for city trade in extracted honey?"

Mr. Wheeler—In the screw-top can you have one that you may ship anywhere and may liquify in, and also by removing the top show the quality by turning a little honey out on a piece of paper. Honey can be exhibited to customers better that way than any other way. We sell our own honey to our own customers, and usually put it up in that way, where orders from a distance come in, but in the store we keep it in 60-pound cans, and always show the honey on a piece of white paper. I think 10 and 11 cents would cover this 10 and 11 pound can; they are very neat. The freight rate on them is the same as on syrup, or nearly the same. It is almost impossible to put it in a bucket and seal it down so it won't leak; if it is thrown down by freight men, that starts the cover at once, and it leaks out, and you not only lose the honey, but it makes your customer feel ugly, and he doesn't want any more of it. I doubt if we can get anything in the world better for all purposes than the screw-top can.

Mr. Rohrs—It was suggested to me to put a little rubber ring on top of the can, and then put the lid on, and that it would prevent all leakage. Has any one experience with that?

Mr. Wheeler—That will answer all right until the baggage smasher gets hold of it; the minute he turns that upside down your honey will leak out. You cannot afford to do that. I have had no complaint shipping these 10 pound pails to Kansas and Missouri. I have had customers there for 12 years, and they would not have a bit of honey in screw-top cans. I have tried it in both of my own markets and Fort Madison.

Mr. York—I would like to ask whether Mr. Baxter shipt to private families or to dealers.

Mr. Baxter—Both.

Pres. Milier—Is your honey candied or liquid?

Mr. Baxter—I ship it just as soon as I get orders.

Mr. Baldridge—For the retail family trade I don't want anything better than common house-pail; a two quart pail will hold five pounds net, with about ⅜ of an inch space above it, and the families who buy the honey have the pail to use afterward, and it is a useful article in every household. Those pails can be bought by the gross for less than 5 cents each, and it makes a cheap package; but if you want to ship it, that is a different question. When a family wants 10 pounds I take them two pails, so as to have a uniform size package.

Mr. York—I should judge from the question that it asks about the retail trade. What package would you suggest for city retail trade?

Mr. Baldridge—For family use I don't see that you want anything different than for retail. I should rather have it in a 60-pound can and draw it as it is sold into any kind of package desired.

Pres. Miller—How many have had any experience with extracted honey for the retail trade? [Seven members had.]

Dr. Besse—Most of my shipping is at Columbus. I have a pretty good trade there. I attend the State fairs, and put the honey in 10-pound pails, in boxes, just the right height, and when the lid is down onto it, I mark it, "This side up with care." I bored holes through the end of the box and slip a rope through and tie the knot on the inside, and two men carry it and keep it right side up every time. That is the way I carry it to the grocery.

Mr. Wheeler—I have sold considerable honey to the retail trade, but I don't know what is the best thing to be used. I use a half-pint jar, open top, with rubber screw cap; that sells the best with me yet.

Mr. Thompson—I find nothing better than a 5-pound pail for the home trade.

[Continued next week.]

Every Present Subscriber of the Bee Journal should be an agent for it, and get all others possible to subscribe for it. See offers on page 71.

Only 6 cts. per Pound in 4 Can Lots or Over.

Finest Alfalfa Honey !

IT SELLS ON TASTING.

The Honey that Suits All Who Buy It.

We can furnish **White Alfalfa** Extracted Honey, in 60-pound tin cans, on board cars in Chicago, at these prices: 1 can, in a case, 7 cents per pound; 2 cans in one case, 6½ cents; 4 cans (2 cases) or more, 6 cents. The Cash MUST accompany each order.

☞ A sample of the honey will be mailed to an intending purchaser, for 8 cents, to cover postage, packing, etc. We guarantee purity.

GEORGE W. YORK & CO., 118 Michigan Street, CHICAGO, ILL.

Page & Lyon Mfg. Co. New London, Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

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that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

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BEE-KEEPERS: We are making a strictly A No. 1 line of

Hives, Sections, Shipping-Cases, Frames,

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We do not claim to sell at cost as we are not in business merely for what glory there may be attacht to it.

We do claim that our goods are as fine as can be produced anywhere, and that our prices will be found fair and reasonable.

We are in a position to serve you promptly and satisfactorily, and we ask you to give us a chance to do so.

Why not write to us to-day for our **Free, Illustrated Catalog?** Or, better still, send us a list of what goods you will require for next season's use, and we shall take pleasure in quoting prices on same. Very truly yours,

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That Queen-Clipping Device Free !

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Send us *just one new name* for the American Bee Journal a year (with $1.00), and we will mail you the Queen-Clipping Device FREE of charge. Or, the Queen-Clipping Device will be sent postpaid for 30 cts. But why not get it as a Premium by the above offer You can't earn 30 cts. any easier. Almost every bee-keeper will want this Device.

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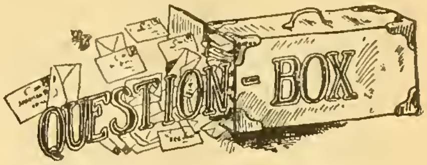

In the multitude of counsellors there is safety.—Prov. 11-14.

Drones—Their Advantages and Disadvantages.

Query 68.—1. Do you think the advantages gained from the elimination of drones to be as great as is generally claimed, or are they over-estimated?

2. Are there not in your opinion counterbalancing advantages derivable from their presence in the hive in numbers more approaching to what Nature proportions them, and which we may possibly have overlookt?

3. Given an equal number of colonies, with queens of one age, and all of equal strength, one set with combs of their own building, and hence no restraint as to drone-rearing, and the other set with only worker-combs, and hence incapacitated from rearing drones, what, in your estimation, would be the difference, approximately, in amount of surplus honey harvested?—S. A. D.

Prof. A. J. Cook—1. Yes. 2. No. 3. No difference.

E. France—Too long a question for this department.

Mrs. L. Harrison—1. Over-estimated. 2. Yes. 5. I don't know.

Emerson T. Abbott—1, 2 and 3. Ask somebody that knows. I do not.

W. G. Larrabee—I never experimented on this, but I hardly see the use of a lot of drones when they are not needed.

C. H. Dibbern—1. They are probably somewhat over-estimated. 2. Yes. 3. I can only guess, but I should prefer to "bet on" the one with worker-comb only.

Eugene Secor—1. That's one of the things I am not sure of. 2. Possibly, quite possibly. 3. Now my "sad" friend, you are getting the matter down too fine. Please excuse me.

R. L. Taylor—1. First clause, I am inclined to think so. 2. No. Who would follow Nature and keep as many roosters as hens? 3. Having no definite facts to go on, I could give nothing better than a guess.

J. A. Green—See query 66. While it would be hard to estimate the difference in pounds and ounces, I feel sure that four-fifths of the drones a colony will naturally rear are not only useless but detrimental to its interests.

G. M. Doolittle—1. Probably over-estimated. 2. Very doubtful. 3. You are going to the other extreme in keeping out *all* drone-comb. Six square inches of drone-comb to each colony puts them in a normal condition and secures the best results.

J. E. Pond—1. No, I do not. 2. In my opinion a normal colony contains some drones, my belief being that Nature is the best regulator we have. 3. The question is too broad for me to answer without some qualification. There should be an equalization of affairs. A few drones are necessary to the best working of the colony. When the season is advanced properly the drones will be destroyed. With me, drones are reared in worker-comb when no drone-comb is supplied, which leads me to believe that drones should be allowed to some extent. As to difference in honey supply in the one case or the other, I know of no means of determination.

J. M. Hambaugh—I think the advantages *as much or more* than are claimed. 2. The advantages to be gained, except as fecundators, is infinitesimally small, in my opinion. 3. Possibly 1/5 to ⅓ more in favor of the colonies prepared with worker-combs.

Jas. A. Stone—1. I think so little of it that I have never practiced it. 2. However that may be, I have never thought the drones in the way till they became very perceptibly numerous through some fault with the queen. 3. I could not say, as I have never observed in that direction.

Dr. J. P. H. Brown—A hundred or two drones in a colony may be admissible; but more are a detriment, as they would consume the stores uselessly. In case your apiary consisted of one colony, more drones might be reared. Nature always looks toward the perpetuation of the species.

A. F. Brown—An excessive number of drones in a colony is certainly a detriment, and is at the expense of the honey crop. 3. With me the colonies having their excess of drone-comb removed and worker-comb in its place, will gain nearly, if not quite, double the yield of surplus the other would.

Rev. M. Mahin—1. I am inclined to think that the advantages are over-estimated. 2. I think that drones in moderate numbers are no detriment to a colony of bees. It is Nature's way. But the cost of production and maintenance is such that the numbers should not be great. 3. I cannot tell.

G. W. Demaree—1. It holds good in the supervisorship of man over the domestic animals under his charge, that intelligent control of number of drones in the hive is not an "extravagance," but rational treatment. 2. Let the apiarist use his intellect, and he may find out what is most profitable.

Dr. C. C. Miller—1. I don't know how much the advantages are esteemed, but I think they should be highly esteemed. 2. No, I don't believe anything of the kind. 3. The difference would be much the same as the difference in drones. The more drones the less honey. So there, you dark-continenter.

Wm. McEvoy—1. Yes, just as great. 2. *No, positively no.* 3. One hundred colonies which have been wintered over with nothing but nice worker-combs in every brood-chamber which have been made out of foundation will produce over *one hundred dollars worth more honey in a good season* than 100 colonies that have been allowed to build all the drone-combs they wisht, and reared all the drones they could.

Bee-Keepers' Photograph.—We have now on hand a limited number of excellent photographs of prominent bee-keepers—a number of pictures on one card. The likeness of 49 of them are shown on one of the photographs, and 121 on the other. We will send them, postpaid, for 30 cts. a card, mailing from the 121 kind first; then after they are all gone, we will send the 49 kind. So those who order first will get the most "faces" for their money. Send orders to the Bee Journal office.

Sweet Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order·

	5℔	10℔	25℔	50℔
Sweet Clover (white).	.60	$1.00	$2.25	$4.00
Alsike Clover.........	.70	1.25	3.00	5.75
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Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

GEORGE W. YORK & Co.
CHICAGO, ILL.

Southern Home of the Honey-Bee

Is now ready for your orders for QUEENS of either **3 or 5 Banded Italians and Steel Gray Carniolans.** More than 300 Tested Queens to begin with. Untested, either race, 75 cts. each; June and until October 50 cents each. Tested $1.00 each. Good Breeders, $2 each. Straight 5-Banded or "Faultless" Queens, $5.00 each. Satisfaction guaranteed.

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Root's Goods at Root's Prices.

BEE-KEEPERS' SUPPLIES in general, etc etc, Send for our new catalog.
Practical Hints" will be mailed for 10c. in stamps. Apply to—

Chas. F. Muth & Son, Cincinnati, Ohio.

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OUR PRICES are worth looking at. We are making the new

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with dovetailed body and supers, and a full line of other Supplies, and we are selling them CHEAP. A postal sent for a price-list may save you $ $ $ $

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That covers the whole Apicultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

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Liberal Discounts to the Trade.

PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y.

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BEE-KEEPERS! Let me send you my 64-page Catalog for 1898.

J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing.

GENERAL ITEMS

Short Crop Last Year.

My bees seem to be coming through all right on the summer stands. There was a rather short crop of honey last year.

WM. A. SCOTT.
Cherokee Nation, Ind. T., Jan. 24.

Good Season for Bees.

I am lost without the American Bee Journal. The last was a good season for bees here. I had 13 colonies, and all but four were new swarms. I bought 6 from a neighbor at swarming-time, and from 11 colonies I extracted 1,000 pounds. The other two were weak and I just got them built up in time for winter. I think that I will devote more of my time to the bee-business, and less to my farming, as I believe it will pay better.

F. S. FRY.
Audrain Co., Mo.

Good Year for Sweetness.

The old Keystone State has been in for a good year of sweetness in 1897—the best since 1894. The best yield from one colony was 158 one-pound sections of honey. I had but two swarms from 18 colonies; one was from a four-year-old queen. She did not swarm for want of room. The other one was for want of room, for they were literally crowded out. I favor large hives and young, vigorous queens for non-swarmers and good honey-producers. I have increast to 24 colonies. I sold my honey at 15 cents per pound before the holidays.

Berks Co., Pa., Jan. 2. C. C. YOST.

Honey Reported Broken in Shipment.

I got 1,567 well filled sections from 20 colonies, spring count, but I do not know how I am going to come out. I shipt 1,027 pounds, gross weight, to a Chicago commission firm Oct. 6; they receipted "in bad order," and I have not heard anything from them since. I do not see how it is, but it appears to me that shippers of honey are the worst imposed on of any shippers. I am afraid to hurry the firm, for if I do that they will claim they have to force sales, and take what they can get for it.

There are quite a number of bee-keepers in this town, and the two adjoining towns, but it is impossible to get them to subscribe for a bee-paper. I was trying to get one of my neighbor bee-keepers to subscribe for the American Bee Journal, and he said, "O, pudle Dick, I know all that is necessary to know about bees." The same man will have from five to ten colonies and not get enough honey for his family use. I shall subscribe for the "old reliable" Bee Journal as long as I can see to read it, and get the dollar.

DANIEL SMETHURST.
Crawford Co., Wis., Dec. 23.

Report for 1897—Honey-Dew.

I started in the season of 1897 with 39 colonies, increase to 54, and got 1,700 pounds of comb honey and 100 pounds of extracted. Bees are all in fine condition for winter, but there is a poor prospect for next year, as there is no white clover.

The first I ever saw of honey-dew was in 1852, in Iowa. I saw it in drops on hickory leaves; it lookt clear and tasted sweet. This was in May or June. I have since noticed bees working in the fall on oak trees, and they filled up on it and the honey had the oak taste. I also saw them, in 1871, working on trees very strong, and I examined them and they were working on places on the young twigs that had been punctured by some insect, and the sap was issuing from the wound. If they stored any of this I did not notice it.

But 5 or 6 years ago we had the heaviest

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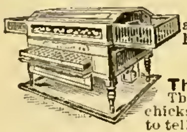

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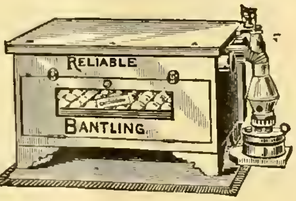

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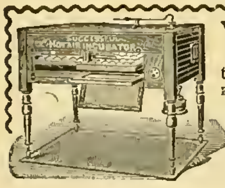

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flow of honey-dew I ever saw, in fact, it was all the surplus of that year. My bees had been working on honey-dew for several days, but one morning my son came in and said he never saw honey-dew dropping off the trees before. I went out, and sure enough, everything was covered. I went to a small hickory tree that stood in the apiary, and the honey was dripping; it was as clear as any honey I had ever seen, and, oh, my, but the bees were carrying it in that day and the next. The honey was as clear and nice as any white clover or basswood I ever saw. The next day it was a little dark, and the next two days it was very dark, then it rained, and it was all gone. I sold $150 worth that year, but sold none of the dark honey; I fed that back to the bees the next spring.

Now the trees, and especially hickory, spoken of had nothing over them for anything to fall from except the canopy of the heavens. It is still a puzzle to me where it comes from. I am satisfied that some comes from insects or sap of trees, but I never can think that the nice, clear stuff that I saw the bees gathering, and saw dripping from the trees, could ever come from insects.

The Bee Journal is good enough every year. I find some article that pays for it, and sometimes several.

R. R. STOKESBERRY.
Vermillion Co., Ind., Dec. 22.

* * *

Bees and Grapes—Fruit-Drying.

Noticing that the interesting paper on "Bees in Horticulture" (page 757, 1897) by Hon. R. L. Taylor, is to be put in type, I beg to inquire where copies may be procured. [When it appears in leaflet form, we will likely announce it.—ED.]

Apropos of this subject, there is one other point which should not be ignored in the discussion. That is the annoyance and trouble caused by bees in fruit-drying. Those engaged in sun-curing fruit in California complain bitterly of this, the trays whereon are spread cut fruit being at times literally swarming with bees, yellow jackets, etc., sapping the juices from all fruits exposed.

This is quite within my own experience, as during the past season we were obliged to cover our trays with mosquito-netting to somewhat stop these depredations; of course, thereby much retarding the process of curing, if not injuring by interrupting the sun's rays and consequent dessication.

I think in my part of the country this is the subject of greater complaint than the sapping of a few broken grapes on the vine.

Prunes, to illustrate, are dipt in lye to crack the skin and hasten evaporation. This affords a splendid opening for the bees, but makes mighty poor honey. In a large drier it would be out of the question, I think, to cover thousands of trays.

Santa Clara Co., Calif. GEO. H. STIPP.

* * *

Foul Brood in New York State.

The warm and rainy weather has made our roads very muddy. Until yesterday morning the thermometer dropt to 10 degrees above zero, and through the day two inches of snow fell. My bees flew up to Nov. 20. Then all were put into the cellar.

Foul brood has been raging in some parts of our county the past season. When the season was about over Frank Boomhower of Gallupville was appointed Commissioner, and since that time he workt faithfully examining bees in and around Schoharie and Central Bridge, where foul brood was making bad work. Some yards of bees and hives I understand were all condemned, and had to be burned. Other yards that were examined, the hives that contained foul brood were markt, and had to be burned. Mr. Boomhower workt until late in the fall examining bees, doing his best to prevent the further spread of the dread disease. We bee-keepers are on the lookout, and are watching our colonies very cautiously. If I have foul brood in my bee-yard I ought to be the first one to know it, and to take care of it at once, and so ought every intelligent bee-keeper. But I am fearful of the careless and the don't-care-for-anybody-else bee-keepers who keep but a few colonies themselves.

The honey crop in this section has been about two-thirds of that of 1896. Farm crops were extra good—barns filled and stacks out-doors. Potatoes rotted, so there will be barely enough raised for home demand.
N. D. WEST.
Schoharie Co., N. Y., Dec. 21.

Report for Three Seasons.

I commenced, for the second time or period in my life, bee-keeping with one colony of black bees in a "cubical hive" in the spring of 1895; not a very auspicious year for beginning. In 1896 I purchast 10 colonies of bees in the standard frame style. By purchase and renting I started the season with 14 colonies, and ended with 32, and 1,400 pounds of honey, all but 100 pounds being comb honey, which I sold at 10 cents for the extracted, and the comb at 12½ and 15 cents per section, to my neighbors and friends. I wintered the bees on the summer stands, and every one of the 32 colonies. In 1897 I got over a ton of honey, all comb except 50 pounds, and sold as before, and could sell more if I had produced it. I increased to 57 colonies, and bought 11 in the new Falconer hive for $22. I doubled up last year's increase in consequence of fall failure and light brood-nests, and now have 57 colonies of my own, and 4 rented from neighbors for increase.
JAMES H. KELSO.
Erie Co., N. Y., Dec. 17.

How One Bee-Keeper Manages.

Three years ago I commenced bee-keeping with one colony and the American Bee Journal. I have been fairly successful. I have kept down swarming by plenty of ventilation and room for storing honey. As soon as the honey-flow commences I put on a super; when nicely at work in that, I put on another one under it. If the bees begin to hang out on hot days, I raise the hive from the bottom, and sometimes move the cover forward a little in the hottest part of the day. The past summer I had a number of colonies that did not swarm, that stored 150 pounds of honey, and went into winter quarters strong in numbers and heavy in stores.

I consider wintering the greatest problem in this northern latitude. I have a very dry cellar under the house. I keep vegetables, etc., in there, too. I have part of it partitioned off dark, but well ventilated. After the first hard freeze in the fall I take off the honey-cloth, have a 1-inch hole inside of the cover, with wire screen on, then put them away. I put hives eight inches apart, one on top of the other, and leave them there till the spring is well advanced. If it should turn cold after taken out, I cover them up with blankets or anything handy, to keep the brood from chilling. I have strong colonies when the honey-flow commences, and rush them while it lasts.

I find the Bee Journal indispensable to the beginner. Long may it live.
Polk Co., Wis., Jan. 10. J. H. DOTY.

Bee-Keeping in Oregon.—Bee-Stings.

This is one of the greatest fruit countries in the world. There was 750,000 pounds of dried prunes raised here this year. We can grow anything but oranges and lemons. I think it will make a fine bee-country. A good many have a few colonies in old gums, but the dovetailed hive is coming to the front. The bees will store some honey every year; 100 pounds is about the best they can do, but 25 to 50 is what they do. The bees can live on the summer stands all winter; can fly some nearly every day when it doesn't rain. We are having lots of rain now. There will be some snow after about a week. There are some flowers all winter for the bees to work on.

I cut six bee-trees the past summer. One had 50 pounds in, another 70, one 10, and the rest about 2 pounds, so you see honey isn't very plenty. The bees can live on a very little; they never use up the honey in the brood-combs.

I am a tenderfoot at the business, but the first thing I did was to find something to kill the bee-stings. I take a small vial and put in some carbolic acid, one part water. When a bee stings I put some of this on, and it kills the sting or poison, and nine times out of ten it never swells. The hands will stand more than under the clothing.

This is a mountainous country, covered with timber and narrow valleys. It is wet six months and dry six, with some rain. There is no fall honey gathered.

I'm 48 years old, and never had eaten 20 pounds of honey up to two years ago; I never had seen a bee-paper, nor any bees to speak of. I lived on the prairie in Iowa, and 21 years in South Dakota. Why don't you send your honey to such places where they can't keep bees, where the people never see or taste honey?

I plant everything that will make flowers for the bees. M. W. PRUNER.
Douglas Co., Oreg., Dec. 15.

The Large Hive the Leader.

Replying to the question of Mr. L. M. Willis, on page 52, I'll take my best nut-cracker; but it seems to me it is only a hazel-nut he is giving me, and not one of those old, hard, horny black-walnuts.

That colony which did the best of all for him is evidently the best because it is pure Italian, and this is evidenced by its being so gentle. As to the hive, I do not believe that I ever held that the hive made the crop, but that it should be large enough to give the best, or rather the best queen, a chance to spread herself. I see that in this instance, that was just what Mr. Willis did, for he gave his 7-frame colony another brood-chamber of 8 frames above. That was really overdoing our methods, for we aim to give our bees only about the capacity of 12 Langstroth frames altogether, and in this instance the colony had 15. But he was fully repaid for his additional room, and I would suggest that he try it again on other colonies if they also prove prolific enough. And they don't swarm! That is our way. See? C. P. DADANT.
Hancock Co., Ill.

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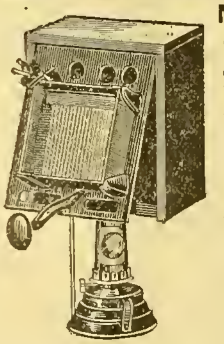

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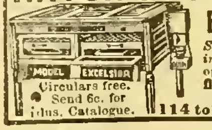

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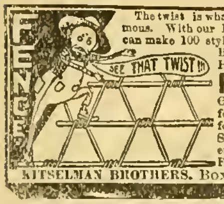

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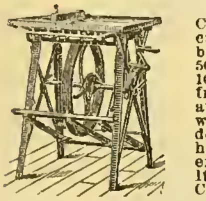
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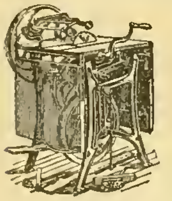
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Fairview Seed Farm.—We wish to direct the attention of our readers to the announcement of the Fairview Seed Farm, Rose Hill, New York, which makes its first appearance for the season of 1898 with this issue. It will be observed that the advertisement contains some extraordinary offers in the way of special collections of seeds and tubers. Their new Mortgage Lifter Potato is well spoken of, and should prove of special value to our readers. Every farmer or gardener should have an experimental plot where new varieties may be tested each season. Many of the best standard sorts of fruits, berries and vegetables have been given to the public in this way. Try this new collection; it does not cost much, and may result in much profit to you. Write then for a catalog, and say you saw their advertisement in the American Bee Journal.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Ill., Dec. 13.—Fancy white 11 to 12c. No. 1, 10c.; fancy amber, 8 to 9c.; No. 1, 7c.; fancy dark, 7c. Extracted, white, 5 to 6c.; amber, 4 to 5c.; dark, 4c. Beeswax, 26 to 27c.

The demand for comb honey is not satisfactory, and it can be bought at even lower prices than quoted, where it is not in the hands of regular dealers. There seems to be no outside demand. Extracted without special change. Beeswax is scarce.

Milwaukee, Wis., Jan 24.—Fancy white 1-lbs., 11 to 12c.; A No. 1, 11 to 11½c.; No. 1, 10 to 11c.; No. 2, 8 to 9c.; No. 1 dark, 8 to 9c. Extracted, in barrels, kegs and cans, white, 5½ to 6c.; dark, 5 to 5½c.

The supply of honey is good and the quality very nice as a general thing. The demand is not up to our desires, yet we are hopeful it will improve and all will be wanted at fair value. We feel like sustaining prices, and continue to quote as above.

Cleveland, Ohio, Dec. 15.—Fancy white, 12 to 12½c.; No. 1, 11 to 12c.; No. 1 amber, 9 to 10c. Extracted, white, 6 to 7c.; amber, 4 to 5c. Beeswax, 22 to 25c.

Detroit, Mich., Nov. 9.—Fancy white, 11 to 12c.; No. 1, 10 to 11c.; fancy amber, 9 to 10c.; No. 1, 8 to 9c; fancy dark, 7 to 8c. Extracted, white, 5 to 6c.; amber, 4 to 5c. Beeswax, 25 to 26c.

New York, N. Y., Dec. 22.—Fancy white 11 to 11½c.; off grades, 9 to 10c.; buckwheat and mixt, 6½ to 7c. Extracted, California white, 5 to 5½c.; light amber, 4½ to 4¾c.; white clover and basswood, 5 to 5¼c.; buckwheat, 4 to 4½c; Southern, 50c. a gallon. Beeswax is in good demand at 25 to 27c.

Our market remains quiet. Fancy grades of white comb are about cleaned up, and these would find sale on arrival at quotations. We have a large stock of buckwheat, mixt, and off grades of white, and, as the demand for these is very light, we cannot encourage further shipments for the near future. Extracted of all kinds is selling fairly well.

Minneapolis, Minn., Dec. 15.—Fancy white, 11 to 12c.; No. 1, 10 to 11c.; fancy amber, 10c.; No. 1, 9½c.; fancy dark 9 to 9½c.; No. 1, 8 to 9c. Extracted, white, 5 to 6c.; amber, 4 to 4¾c.; dark, 4c. Beeswax, 23c.

Market holds firm at above prices. Good demand for extracted. Wax is quiet but firm at 23c.

Albany, N. Y., Dec. 13.—Fancy white, 12 to 13c.; No 1, 11 to 12c.; fancy amber, 8 to 9c.; No. 1, 8c; fancy dark, 8c.; No. 1, 7½ to 8c. Extracted, white, 5 to 6c.; amber, 4½ to 5c. dark, 4 to 4½c.

There is an ample stock of comb on hand and selling freely at quotations. Extracted is not plentiful and from information received there is not much in the hands of producers.

Buffalo, N. Y., Jan. 14.—Strictly fancy 1-pound comb honey is more active at mostly 10c., occasionally 11c., but all other gradas are dormant and have to be cut to almost any price to move them, ranging from 8c. down to 5c. Extracted is also very dull at 4 to 6c. We cannot recommend the shipping of honey here unless it is strictly fancy 1-pound sections.

There is no selling pressure of consequence on desirable lots of water white, either comb or extracted, such being held as a rule at full quotations. Amber grades are in greater supply than the demand and market for this class presents an easy tone. Dark qualities are in poor request, despite low asking figures. Beeswax is firm at current quotations, with very little offering, either from first or second hands.

St. Louis, Mo., Jan. 17.—We quote honey nominal, but very little selling. Demand is light. White comb, 1-lbs., 10 1-2 to 12c.; amber, 8 to 10c.; dark, 5 to 7c.; broken comb, 4 to 7c. Extracted, in cans, white, 5¼ to 5 1-2c.; light amber, 4¾ to 5c.; amber, 4¼ to 4 1-2c.; dark, 3 1-2 to 4c. Beeswax, 25 to 25 1-2c. To sell honey in lots above prices would probably have to be shaded a little.

Indianapolis, Ind., Jan. 15.—Fancy white, 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand.

Kansas City, Mo., Jan. 20.—Fancy white, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

The market is well supplied, and demand is light.

Boston, Mass., Jan. 18.—Fancy, in cartons, 12½ to 13c.; in glass, 11 to 12c.; A No. 1, 10 to 11c.; No. 1, 9c.; No. 2, 8c.; No. 3, no sale. Beeswax, 27c.

The demand for honey is light on all grades, with a full supply. Pure beeswax is in good demand, but supply is light.

Philadelphia, Pa., Jan. 18.—Fancy white, 10c.; No. 1, 9c.; amber, 8c. Extracted, white, 5c.; amber, 4c.; dark, 3¾c. Beeswax, 28c.

Late arrivals of California honey have demoralized our market.

Cincinnati, Ohio, Jan. 17.—There is no change in prices, but rather a slow demand for all kinds of honey. We quote 10 to 13c. as the range of prices for best white comb honey, and 3 1-2 to 6c., for extracted, according to quality. Beeswax is in fair demand at 25 to 27c. for good to choice yellow.

San Francisco, Calif., Dec. 8.—White comb, 1-lbs., 7½ to 9½c.; amber, 4 to 6c. Extracted, white, 4½ to 4¾c.; light amber, 3½ to 3¾c.; dark tule, 1¾ to 2¼c. Beeswax, fair to choice, 22 to 24c.

List of Honey and Beeswax Dealers.

Most of whom Quote in this Journal.

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New York, N. Y.
HILDRETH BROS. & SEGELKEN,
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Kansas City, Mo.
C. C. CLEMOMS & Co., 423 Walnut St.

Buffalo, N. Y.
BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.
CHAS. DADANT & SON.

Cleveland, Ohio.
A. B. WILLIAMS & Co., 80 & 82 Broadway.

Philadelphia, Pa.
WM. A. SELSER, 10 Vine St.
Mr. Selser handles no honey on commission

St. Louis, Mo.
WESTCOTT COM. Co., 213 Market St

Minneapolis, Minn.
S. H. HALL & Co.

Milwaukee, Wis.
A. V. BISHOP & Co.

Boston, Mass.
BLAKE, SCOTT & LEE., 57 Chatham Street.

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WALTER S. POUDER, 162 Massachusetts Ave.

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Note.—The 1896 No. 5 Hives include a honey-board as well as foundation starters, and the No. 5E have these omitted. The No. 6 have the D section-case arrangement, complete with sections and starters; and the No. 6E the same, without the sections and starters.

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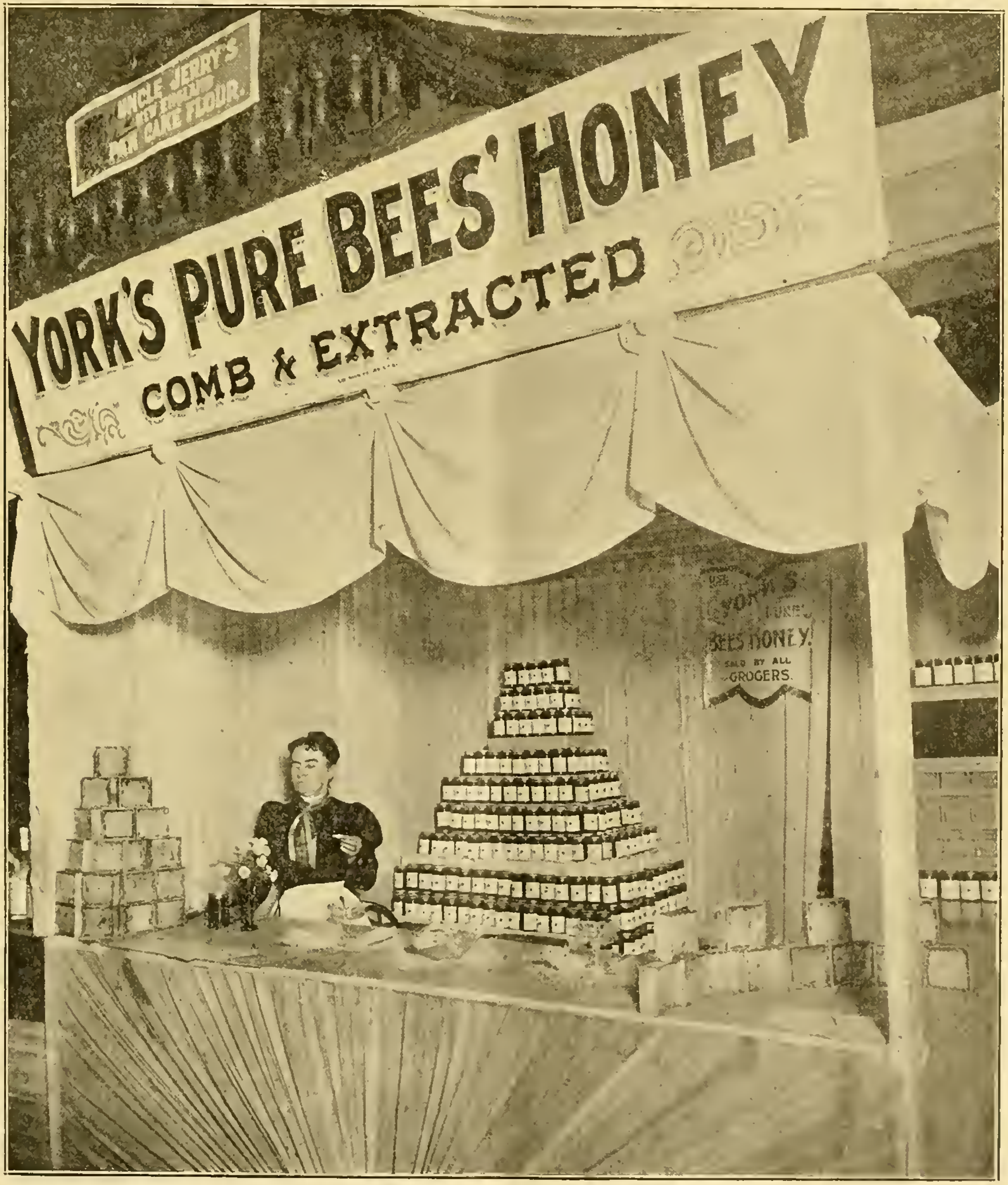
38th Year. CHICAGO, ILL., FEBRUARY 10, 1898. No. 6.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Honey-Booth at the Chicago Food and Health Exposition, in October, 1897.---See page 88.

CONTRIBUTED ARTICLES

Improvements in the Rearing of Bees.

BY ADRIAN GETAZ.

Can it be done? That is, can we by judicious selection create a race of bees far superior to those we possess now?

Certainly we can. See what has been done in the line of other domestic animals—cattle, horses, dogs, chickens, pigeons, etc. And in the line of bees themselves a careful selection has brought the 5-banded and the Albinos out of the common Italians.

What are the qualities to be sought? Well, hardiness to stand the winter; prolificness of the queens; activity; longevity; beauty; and other minor points.

THE SIZE OF BEES.

In connection with the above-named qualities, the length of the bee's tongue has an important bearing. There is no possible doubt that bees with longer tongues than those our actual strains of bees possess, would be able to gather nectar out of many flowers which are too deep for them under present conditions. One of these flowers is the common red clover. And if we consider that with the progress of agriculture, the white clover, forest trees, and wild plants, are disappearing, while the red clover will hold its own, and even increase in area, the importance of having bees able to gather the nectar from it is incontestable.

It is evident that a larger-sized bee would have a longer tongue, so in that respect an increase of size is desirable. The question whether it would be otherwise an advantage has been very much discust. For my part, I say unhesitatingly yes, and a big YES at that.

We may presume that a larger bee would fly as fast, if not faster than a smaller one. It is said that large insects are sluggish compared to small ones; and that is often true in comparing different species, because there is a difference of constitution, shape, etc., besides the difference of size; and even then it is not always true. A fly and a mosquito are much smaller than a bee, and certainly do not fly any faster.

Supposing that the larger bee does not fly any faster, and does not gather the nectar any quicker than the smaller one, there would be yet a considerable saving of time in going and coming. For instance, if the large bee can take in one load twice as much as the small one, the time to make one trip to the fields and back would be saved each time, and this would be a considerable item, especially during a heavy flow.

Among the different kinds of wild bees of our country, only the largest (bumble-bees) gather honey in anything like a quantity. In India, there are quite a number of different kinds of bees similar to ours, some not larger than ordinary flies, but only the large kinds store more honey than they need, and the largest kind, the famous Apis dorsata, build combs several feet in length, and produce more honey than any other wild bee known.

INFLUENCE OF FOUNDATION ON BEES.

The first step to take would be to use a larger size of foundation cells. The size of the cells limits the size of the bees, as any one who has had drones reared in worker-cells knows. Before the foundation was in general use, there was a considerable difference in the size of the different strains of bees, as can be ascertained by consulting the old text-books. Now, we do not hear any more of it, because the general use of a uniform foundation has brought all the strains of bees to a uniform size.

A difficulty to avoid would be an over-production of drones. The only prevention that I can see would be to increase the size of cells only of a small proportion at first, say one-fifth, and when the new strain of bees should be well establisht, make another increase, and repeat the process if found practicable.

SELECTION FOR BREEDING.

But the increase of the size of the cells is not the only requisite to obtain larger sized bees. Besides that, other qualities have to be considered. So it will be necessary to select the queens producing the largest and best bees, all considered. Here we meet with serious difficulties. In improving cattle and other large animals, every individual can be examined, all its qualities and defects considered and tabulated, and a proper selection as to mating can be made. With bees the case is altogether different. We cannot examine each bee and put down in a book her qualities and defects, and the length of time she may live. Worse than that, we cannot select the drone even if we could ascertain beyond doubt which individual drone is the best. Practically, the only way is to rear the queens and drones from the colonies having given the best results, and destroy the drones from the other colonies by cutting the drone-comb or using the queen-trap.

CONCERNING THE PERFORATED ZINC.

Perforated zinc to control the production of drones and prevent swarming is an old invention, but never came into general use until the use of a uniform foundation produced uniform-sized bees, for perforations entirely too small for the workers of large size would have permitted the queens of small strains to go through. As to preventing the drones, the case is much easier. The difference of size between queens and workers, so far as the thorax is concerned, is very small, while between workers and drones it is considerable. The small drones reared in worker-cells cannot pass through the zinc. With larger bees we would have to adopt larger perforations. Probable the increase in size of the perforations would have to equal the increase in size of the cells. If the zinc were to retain the queens, it would be necessary, in selecting, to choose not only the queens producing the largest workers, but the largest queens themselves, which is entirely another thing.

Perhaps I should add that larger bees and larger foundation cells would also require a larger hive, or, rather, a larger brood-nest.

APIS DORSATA.

An increase of size in bees is necessarily connected with the introduction of Apis dorsata. As to its desirability we find as much divergence of opinions as concerning an increase of size in our common bees. I think these bees would likely be a valuable acquisition. They undoubtedly produce a larger quantity of honey in their native country than all the other kinds of bees. They are as manageable as our bees, according to Frank Benton, who is unquestionably a competent bee-keeper. The fact that the natives climb the trees almost naked, and cut off the combs to take the honey, shows that they can be handled as well as common bees.

It is not likely that they could stand much cold weather, so it would be well to introduce them at first only in the most southern States.

The fact that they build their combs in the open air is not an objection. It is merely a question of climate. All kinds of bees build in the open air in the tropical countries.

One objection exists: Their drones and workers are said to be reared in cells of the same size. If it is really so, the control of the over-production of drones by cutting the drone-combs could not be resorted to, which would certainly be a disadvantage.

INFLUENCE OF THE NURSE-BEES.

Some incidental questions merit consideration. One is the influence of the nurses, that is, the bees nursing the brood. It has been claimed by some superficial writers that the characteristics of the nurse-bees were transmitted to the young bees through their feed. It would take quite a long article to show the error of this opinion, however I may state here that the food taken by the brood is so completely transformed through the chemical processes accompanying the digestion, that whatever "moral" or "intellectual" qualities it might have before being eaten by the young bees, have certainly disappeared by the time the process of digestion and assimilation is completed.

The influence of the nurses or the adult bees is one of example. If the old bees are cross or inclined to rob, the young ones will more or less follow their example, and this is why these characteristics will sometime persist after the queen has been changed.

It has also been said that the ability to stand bad winters must be transmitted by the nurses, for how can the queen, which is always in the hive, transmit to her workers the faculty of resisting the cold when she does not possess it herself? This seems a strong argument at first, but it is none at all, after all.

Here are two queens, No. 1 and No. 2. No. 1 produces workers able to resist the cold weather, while the workers of No. 2 cannot. Well, when the winter comes, the workers of No. 2 will die out; so will the queen, necessarily; so by the next summer only queen No. 1 will remain, and produce not only workers but young queens, which, like herself, will have workers able to withstand the cold. It is a mere question of the survival of the fittest, and the influence of the nurses is a question of good and bad example to the young generation.

The quality and quantity of the food have, however, an influence on the development of the eggs and larvæ, and in that way the nurses have an indirect influence through the food they provide. This influence is strong enough in bees to change the development of a fecundated egg from a worker to a queen. But the germs of the organs of both worker and queen were present in the egg, and the difference is that a certain set of organs was developt in one and not the other.

INFLUENCE OF THE DRONE UPON THE QUEEN.

Another point has been erroneously advanced. It is well known and incontestable that the drones are born of unfecundated eggs, and that all the eggs of an unfecundated queen, if she is otherwise sound, will hatch, but hatch only drones, while all the fecundated eggs of an impregnated queen will hatch workers or queens, according to the food they receive. Well, some have claimed that the drones will have some of the qualities of the drone which fecundated their "mother." This seems hardly possible. When a queen is fecundated the male germs enter a little sack inside of the queen's body, and remains there completely separated from her eggs or any other of her organs. Her eggs are produced in another and entirely different part of her body. As they mature and come out they pass before the opening of the said little sack. If the sack is kept closed up, the eggs come out unimpregnated, and hatch out drones. If the sack is opened, one or more male germs come out, enter the egg as it passes, and that egg will produce a worker or a queen.

A CAUTION.

A fact often overlookt is that the bees of an apiary will always mix, more or less, from one hive to another. Many apiarists have thought that the queens they bought were not pure, or that their 5-banded queens did not produce all 5-banded workers, when the faulty bees they saw had come from other hives. I have had proof of such cases time and again in my own apiaries. To be sure, in every case it is necessary to observe carefully the very young or hatching bees.

Knox Co., Tenn.

Snow in the Apiary—Its Advantages.

BY C. P. DADANT.

Since our fields have put on their warm white winter clothing, it is well for us to consider what is best to be done for the colonies that are wintering under this white sheet in the apiary. Is it necessary to remove the snow from the hives, or should it be left for a protection?

That this snow is a protection to our fields and our meadows all our farmers well know. It is a non-conductor of heat or cold, and the ground under it retains its natural warmth. When the snow melts, the wheat and grass show, by their green blades, that this mantle has been beneficial. The hives, likewise, if partly or entirely buried in the mound of snow, will retain the warmth of the bees, and many of our old apiarists purposely pile up the snow over their hives.

In Canada, in Siberia, bees live well through the winter and come out strong and healthy if a sufficient shelter of snow has protected them. The conditions, in those countries are, however, somewhat different from what they are at our latitude. The sun there has but little strength during the winter months, and when the hives are entirely buried their natural heat alone has any effect upon the snow. It causes it to melt away from the wood slowly but by a steady action, and the openings of the hive are thus liberated, and ventilation secured.

In our latitude of central Illinois there are but very few days when the sun does not more or less cause a thaw, the snow changes to ice, and an additional freeze-up by a sudden change of wind may completely close up the entrance and air passages. This condition would lead to the suffocation of the bees so confined if protracted beyond a few days unless some aperture or crevice at the upper part can give a chance for the ingress of pure air. So there is a danger against which we must guard and a little snow, enough to close the air-holes with ice is much more dangerous than a drift in which the hive is ensconced as in a cellar.

That a few degrees in latitude make a great difference as to the results for the protection to be derived from the snow, is not to be doubted. I have had occasion to visit northern New York and a part of the Province of Ontario in the winter, and I have noticed with what faith in the thin coat of snow the vehicles of all kinds embark into trips on sleds. Everything is on sleds from the omnibus to the dray cart, and it looks as if they might be tempted to put the electric cars on runners as well. Hereabout, if we venture ten miles from home in a sleigh we run great risks of having to come home in a skiff.

So the snow is not to be trusted too far, and the south side of our hives is in danger of being quickly uncovered of its shelter when it is of this flimsy material. Acting upon this experience we have been in the habit of banking up the snow, when there is plenty of it, on the north and west sides only, and carefully cleansing the apron-board on the first warm day after the snowfall. If the weather gets mild enough for a bee-flight, our bees then find themselves dry footed in front of their hive.

We have seen many bee-keepers close their hives on a warm day in snow time to keep the bees from flying and getting lost on the trip. We have never found any benefit in this method. When the weather is warm enough for the bees to fly, if they are confined they will fret and worry, and if their abdomen is loaded with fecal matter or excrements they may be compelled to discharge these excrements in the hive to the discomfort of themselves and their sisters. Better let them fly, and run the risk of their not returning. Not only is this reasonably plausible in theory, but practice has confirmed our view of the matter, for we have invariably noticed that those colonies which take the freest flight on warm days, and consequently seem to lose the greatest number of bees on the snow, prove to be the best colonies in the spring.

All things considered a heavy snow is to be taken as more beneficial than injurious to the interests of the apiarist, for if it is a sign of protracted cold—which is by no means always the case—it is also a prophet of prosperity since it shelters the land and promises us a healthy growth of grass, clover and other plants, and adds moisture in the ground, which slowly penetrates to the roots of the plants.

Hancock Co., Ill., Jan. 27.

Bees Clustering Between Brood-Frames and Cushion—Feeding Bees in Winter.

BY EDWIN BEVINS.

I shall have to confess to my inability to see what there was in "Iowa's" first question (see page 39) that led Dr. Miller to infer that there was an open space between "Iowa's" brood-frames and his cushions, unless this inference can be accounted for on the ground of surprise that any bee-keeper should be surprised at feeding his bees clustered up against the cushions when the cushions rest on the frames, or having a Hill's device or some sticks between the frames and cushions. If "Iowa" were to come into my yard now he would find the bees in every hive, except a few colonies in two-story hives clustered up against the cushions. This gives me no surprise and no uneasiness. I know that there is plenty of honey in all the hives for present needs, and that the bees will get it when they need it. The bees cluster up against the cushions for the sake of the warmth which rises from the cluster and is arrested and held by the cushions.

If my bees were in a barn without any packing around the hives except a cushion in an empty super over the frames, I might feel some of "Iowa's" apprehension that they might not winter safely.

It seems that "Iowa" has yet to learn that a building of any kind where the temperature varies much is about the worst place in the world to winter bees in. If I had some bees in a barn, as "Iowa" says he has, I should lose no time in getting them out of the barn and into a winter-case such as I now make for all of my bees. These cases are cheap, and I have found a way to make them so that it does not take the apple-orchard and calf-pasture to store them in when not in use.

If "Iowa" or anybody has bees that are getting short of stores, no time should be lost in making some cakes of candy from granulated sugar as recommended by Mr. Abbott. And here let my say that in time it will come to be recognized that Mr. Abbott has given us a cheap, easy and sure method of saving a colony of bees that happens to be starving in cold weather. I may be pardoned, perhaps, if I enlarge a little on what he says about making the candy:

If I want but one cake to help out a colony that has nearly enough honey to carry it through, I put a pint of water into a kettle that has a rounding bottom with short legs to keep it from tipping. When placed on the stove the center of the bottom of the kettle just touches the top of the stove. I remove a stove-cover at first and set the kettle next to the fire till the water boils, then I pour in five pounds of granulated sugar and stir constantly while pouring it in.

Then if the fire gets quite hot, and the syrup begins to foam up, I raise the kettle and put the stove-cover under it. The boiling will continue in the center of the kettle, and there is no danger of burning unless your wife or your daughter, or your hired girl, comes around and builds up a big fire to bake some bread or heat the flat-irons. In that case you may have to move your kettle to some other part of the stove. If the bee-keeper happens to be unmarried, he will remain undisturbed, as it is not likely that his sweetheart will be around on such occasions.

Keep stirring while this slow boiling is going on till the water is nearly evaporated. You can tell when this takes place by the manner of the bubbling which is going on in the kettle. If the bubbles are few, and the bubbling labored, you may know that the job is nearly completed. Put a spoonful or so of the bubbling mass into a cup of cold water and you can tell for sure.

Pour the mass out into a common-sized, oblong baking-tin, and you will find the tin is just even full. When sufficiently cool, place the cake over the cluster, bottom side up, with two or three sticks half-inch thick under it. You may have to take a little of the stuffing out of the cushion, and then it will tuck down nicely over and around the candy. My sacks for cushions are made somewhat longer than the supers and left open at one end, so that it is an easy matter to remove part of the chaff. Decatur Co., Iowa.

CONVENTION PROCEEDINGS

Report of the Northwestern Bee-Keepers' Convention, Held in Chicago, Nov. 10 and 11, 1897.

REPORTED BY A SPECIAL BEE JOURNAL REPORTER.

(Continued from page 74.)

FIRST DAY—EVENING SESSION.

GRANULATION OF HONEY IN WOOD, TIN OR GLASS.

"Will honey granulate sooner in a wooden or tin pail than in glass?"

Pres. Miller—Who knows anything about that? I will venture a suggestion, that it ought not to granulate quite so soon in wood or tin, because it is generally supposed that light has a little to do with it; on that account, other things being equal, it ought to granulate just a little sooner in glass than in wood or tin, but I don't know anything about it.

Mr. Baxter—I don't believe that light has anything to do with the granulation of honey. I never found that out. I believe it depends upon the temperature altogether. The variation of temperature causes it to granulate much sooner than an equal temperature. That has been my experience. The way I can get honey to granulate the quickest is to take barrels and move them around often, and especially if they are down in the cellar. But if I take liquid honey and put a few grains of granulated honey into it, it will granulate very fast. I think it is owing to variations in temperature.

M. S. Miller—I askt that question, and the reason I askt it was, I have had it stand around in tin packages and glass, and while that in glass did not show any signs of granulation, in tin it did. There was another thing in my mind: The honey in tin packages had been more exposed to air, having been opened several times; perhaps that had something to do with it. I don't know what to think of it. It made quite a difference in selling honey to the city trade.

Pres. Miller—Was the honey put in at the same time?

M. S. Miller—It was, and the same kind of honey.

Pres. Miller—Was there any difference in the handling afterward? Was one shaken any more or handled any more than the other?

M. S. Miller—If it was, the one in tin was the most. I am not sure whether there was much difference. The cans were filled about the same time from the same honey.

Mr. Baxter—Mr. Christie, who used to attend these meetings from northwest Iowa, told me that he sells his Spanish-needle at retail by canning it, and sealing it up tight; it never granulates then. The more exposed to air it is the more it will granulate.

Pres. Miller—To what point would you heat it?

Mr. Baxter—It wants to be so the air is thoroughly driven out.

Pres. Miller—If you go beyond 160° you are in danger, you know.

Mr. Baxter—By putting the cans in warm water there is no danger.

Pres. Miller—It hurt my honey; it may not dark honey.

Mr. Baxter—It won't white clover honey. Put it in hot water. I put my jars on a board in the bottom of a boiler, so the glass does not touch metal at all, and I have never had any trouble.

Mr. Green—Have you ever heated heart's-ease honey to that point?

Mr. Baxter—Yes, I have?

Mr. Wheeler—Some samples of heart's-ease honey we find granulating in a day or two after they are put in jars, especially if put in while warm, but I have a sample of honey which I had on exhibition at the World's Fair which was shipt down here in November, and after it was sent home it was shown at the Nebraska State Fair twice, and has not granulated yet. Those samples were treated differently. I took it off in the fall, carried it in a warm room in combs; it was extracted in April, and put into jars and shipt down here; it weighed 13 pounds to the gallon. I have had it show the effects of granulation while I was shipping it 100 miles. If honey is taken off and extracted and put into jars while yet warm from the hive, it will granulate much quicker than if it is kept on hand to ripen more.

Pres. Miller—I have no doubt that Mr. Wheeler has struck an important point; if we don't want honey to granulate it should be very ripe.

Dr. Besse—I have had some experience in keeping honey from granulating, and am satisfied that if you bring it almost to the boiling-point and put it in fruit-jars and can it up with sealing-wax, air-tight, you can keep it for years without granulating; and by adding a little cream of tartar with it—I want to ask whether or not that would be adulterating it.

Mr. Wheeler—How much to 60 pounds?

Dr. Besse—Well, to 100 pounds I should think about a tablespoonful.

Mr. Wheeler—What effect has that on the honey as to its color?

Dr. Besse—No effect at all. It will keep sugar from crystalizing, and I should think it would honey. I don't think there would be any harm in adding it.

Mr. Baxter—If the secret in keeping honey from granulating is to have it thoroughly ripened before extracting it, why is it that in California they extract it before it is ripe, and it never granulates?

Mr. Wheeler—It does not granulate in extremely dry air like California so quickly as it does here, because it does not gather moisture from the air.

Pres. Miller—All familiar with honey know that the character of the honey itself has a great deal to do with granulation.

Dr. Besse—I have some honey put up in one-half pound and pound jars, that has been put up for four or five years; some of it did not granulate at all, but the greater part did.

Mr. Wheeler—I think that point by Dr. Besse is a good one, about adding cream of tartar, if it works. I would like to find out what experience he has had; in what shape he adds it, and so on. I think there is a great demand by the people for honey that does not granulate, and if we can find something that will not be considered adulteration, I think that is one of the greatest helps to the sale of extracted honey there is.

Mr. York—I would like, as Mr. Wheeler asks, that Dr. Besse tell us a little more about what has been his experience in using cream of tartar to prevent granulation of extracted honey.

Dr. Besse—I have never used it, but I have been tempted to use it. I am against adulteration.

Mr. Green—Perhaps my experience with cream of tartar would be of some use. I used to use it for putting up sugar syrup for winter—a piece to 10 pounds of sugar. I think I used a piece of tartar about the size of a hazel-nut mixt with hot water, and added to hot syrup; boil a little after that, and it would never granulate or crystalize, and if used in honey in the same way it might have the same effect.

Dr. Besse—I am satisfied it will keep honey from granulating the same as sugar from crystallizing. I should like to have our friends here experiment on that. I don't think there would be anything wrong in it at all.

Mr. Wheeler—I have tried using it in sugar syrup, and it didn't work at all. It granulated just as quick with it as without it.

Pres. Miller—H. D. Burrell reported that he used tartaric acid, and his syrup granulated solid in the combs.

Mr. Green—I should suppose the reason of that would be, it was not boiled after the tartaric acid was added; it must be boiled slowly afterward.

Mr. Wheeler—Mine was boiled at the time I put it in.

Pres Miller—I don't believe you can settle "why;" you will find it sometimes will and sometimes won't.

Mr. York—I read in one of the monthly bee-papers, about a year ago, that to prevent the granulation of extracted honey if ⅛ water were added it would do it. It was written by one who ought to know what he was talking about.

Mr. Green—I should think that would make some honey granulate more readily.

Mr. Wheeler—I am pretty sure it would sour it.

[Continued next week.]

⁂

Report of the California State Convention.

BY JOHN H. MARTIN.

The California State Bee-Keepers' Association held its annual meeting in Los Angeles Jan. 10. The meeting was called to order by Pres. A. J. Cook at 2 p.m. There was no set program, and a committee was appointed to prepare one—composed of C. A. Hatch, J. F. McIntyre and H. E. Wilder. While the committee were out, Prof. Cook gave a short review of topics that should be discust by the association: 1st, The old vs. the new Union. 2nd, Adulteration. 3rd, The Bee-Keepers' Exchange.

Mr. W. L. Porter, a prominent bee-keeper of Colorado, and Mr. Thos. Wm. Cowan, editor of the British Bee Journal, England, were present, and were introduced, also elected honorary members.

The report of the committee on program was presented, and the first topic considered was

THE TWO BEE-KEEPERS' UNIONS.

Mr. McIntyre was in favor of the amalgamation of the two Unions. The National Union had been a great success in defending bee-keepers against prosecution by fruit-men and others who considered bees a nuisance; but it was not disposed to prosecute the adulterators of honey. The United States Union proposes to take this very important matter in hand, and he was decidedly in favor of uniting the two.

The tendency of the discussion was in the same strain. Several who had heretofore been opposed to the amalgamation of the two were now in favor of it. Mr. C. A. Hatch presented the following resolution:

"*Resolved*, That the new United States Union should absorb the National Union."

Upon putting the resolution to vote, 43 favored it, with none opposing.

Upon a motion by R. Touchton, the Secretary was instructed to inform the respective managers of the two Unions of this action.

The next subject for discussion was

THE ADULTERATION OF HONEY.

Mr. Hatch said that the adulteration of honey was practically stopt in Wisconsin by the enactment of stringent laws and the enforcement of them.

C. H. Clayton, author of the present law in this State against adulteration, said that the proper enforcement of the law in this State would have the same effect; but as the greatest amount of adulteration was practiced in the East, a general pure food law should be enacted under which we could work more effectively.

BEE-KEEPING IN ENGLAND.

This topic was on the program, and the announcement meant that Mr. Thos. Wm. Cowan would give the assembled bee-keepers something interesting upon that subject, and they were not disappointed. We wish that we could give a more perfect report of the address, but we trust that the report we do give will repay perusal. Mr. Cowan, in substance, said:

That while in California large apiaries are common and encouraged, in England there are but few large apiaries, and large apiaries are not encouraged; the small apiary is the rule in England, and many of the apiaries are kept in fruit-growing districts for the purpose of fertilizing the fruit-blossoms.

Bee-keeping, according to improved methods, began about 1860. The Langstroth hive was introduced at that time, and was used by the most progressive bee-keepers, but the real advance did not become general with bee-keepers until 1873. Up to this time many straw and other rude hives were used, but now the Langstroth hive is gradually superseding all others. In 1874 the British Bee Journal was started and an association organized; something of an impetus was also given to the industry through the exhibits of honey in the Crystal Palace in London.

In organizing the British Bee-Keepers' Association it was difficult to get bee-keepers to attend. The Association is now made up from affiliated societies. The various county societies are obliged to elect two delegates to represent them in the council, which meets every month. Often the delegation from a county society will number eight or ten, and a large attendance at the council is the result. Refreshments are served, and then follow papers and discussions upon topics of interest to the various societies.

Through its thorough organization the British Bee-Keepers' Association is doing excellent educational work, several books upon the different branches of apiculture having been publisht. The Association grants certificates to the most proficient in the manipulation of not only frame hives but straw hives as well, and in the management of foul brood and other diseases. When an examination of candidates for certificates is to be held, several counties unite and select a place where bees can be manipulated. After the candidate is examined, the examination papers are sent to London and past upon by the council. In order to secure a certificate the candidate must be able to give a lecture upon any subject in the practice of bee-keeping.

Experts for the handling of foul brood are appointed and compensated according to the work done. The expert does not visit keepers who are well up in their business, but it is the careless or ignorant bee-keeper whose bees are found diseased. In many districts in England the bees have all died from this disease. It was virulent because many bee-keepers had no knowledge of the interior of a bee-hive; straw hives, or something equally inaccessible, were in use; such bee-keepers would defy the expert, for there was no law to compel the destruction of diseased bees. The Association had adopted a system of payments where foul-broody colonies were to be destroyed, and tho the payments were small it satisfied the owner of the bees, and enabled him to purchase healthy colonies if his own were all destroyed.

The honey market is developt by the holding of honey-shows in the various counties, and a central show in London. A system of labels has been adopted. These labels are issued by the county association. Each member is alloted a number which is stampt upon his label; if he sells inferior honey it is traced to him, and his name is stricken from the Association.

The Association employs an analyzer, and if a person is caught adulterating honey or selling it under an Association label he is imprisoned; they are not left off so easily in England as they are in this country.

There are about 53,000 bee-keepers in the British Isles. They will average five colonies each: in favorable localities the yield is from 100 to 150 pounds per colony, but the general yield is from 50 to 60 pounds.

The bulk of the product is extracted honey, and is put up in 50-pound, 28-pound, and in as small as 4-pound tins; packages smaller than that are of glass.

The wholesale price for comb honey is from 14 to 20 cents; extracted honey 12 cents. The value of the annual product is about $750,000. Besides the home production there is a monthly import of from 10,000 to 15,000 pounds, the greater portion of it from the United States and Canada.

Imported honey is not inspected until it is put upon the market. American honey was held in good repute until in 1879; in that year Mr. Hoge, who represented Thurber & Co., of New Nork, sold a large amount of adulterated honey, and American honey has not regained the prestige then lost.

The sources of honey in England are white clover, sainfoin, linn, buckwheat, and the heather honey of Scotland. Heather honey is darker even than buckwheat, but it sells for a better price on account of its delicious flavor; it is usually sold for 60 cents per section. It is so thick that it cannot be extracted. To secure it in the liquid form the comb must be submitted to pressure; this honey sells for 36 cents per pound. The best imported honey comes from America and the Sandwich Islands. Granulated honey sells readily, and the bee-keepers' association is educating people to use it in that form.

The bee-keeper and the fruit-grower are in accord; the fruit-men recognize the utility of the bee in the fertilization of blossoms, and seeks to have the bees near his orchards.

An orchardist in Gloucester planted 200 acres of fruit; the orchard was a complete failure in fruit-bearing until a Scotch bee-keeper put in 50 colonies of bees. When properly fertilized by the bees the orchard began to bear. The acreage was then extended to 500 acres, and the apiary was increast to 200 colonies; the orchard now produces a large amount of fruit, a large jam factory is operated on the tract, and all of this prosperity is owing to the beneficial intervention of the honey-bee. Several instances of a similar nature might be cited. The honey-bee is certainly a great factor for the production of perfect fruit.

The following committee was appointed to draw up a memorial to Congress in reference to the passage of a general pure food law: N. Levering, R. Touchton and J. H. Martin.

DEEP-CELL FOUNDATION.

This foundation has not been tried to any extent yet, and it is still problemetical if it ever becomes a commercial success. Several bee-keepers had noted that bees would not work deep-cell foundation as readily as they will foundation. The new Weed process foundation was considered by those who had given it an impartial trial as superior to all other foundation.

The election of officers was next in order, and with the following result:

C. A. Hatch, President; Elon Hart, Vice-President for Los Angeles county; Delos Wood, for Santa Barbara; M. H. Mendleson, for Ventura; Dr. E. Gallup, for Orange; F. G. Reynolds, for San Diego; H. E. Wilder, for Riverside; and J. C. Kubias, for San Bernardino. J. F. McIntyre, Secretary; J. H. Martin, Treasurer. G. S. Stubblefield and R. Touchton, executive committee.

EVENING SESSION.

The evening session was opened by Mr. Geo. W. Brodbeck upon

THE BEST SECTION FOR COMB HONEY.

He exhibited honey in the new no-bee-way section, and pointed out the advantages of the same, viz: that the section appeared better filled, and that more of them could be packt in a case. The disadvantages were that the combs were too near in contact with each other when packt in a case, giving inducement for miller-worms to work; and if the face of the comb was not perfectly even there was liable to be abrasion and leakage. From a side view the section appeared to be light weight.

M. H. Mendleson had used the Danzenbaker or tall section, and had excellent success in producing a first-class honey and selling a portion of it for a good price. He proposed to use them exclusively in the future.

Under the head of the keeping qualities of comb honey Mr. C. S. Stubblefield said that he had kept white sage honey for three years without detriment to the honey.

NATURAL VS. ARTIFICIAL SWARMING AND THE METHOD OF INCREASE

was the next subject for consideration. Mr. Mendleson said that if his bees swarmed freely he let them swarm, but if they did not then he resorted to division.

Mr. McIntyre desired to prevent swarming, but if he wisht to increase he usually let the colony swarm, then removed the hive from which they issued, and made as many nuclei as there were good queen-cells. The swarm that had issued was returned to the old location, and put into a hive filled with foundation as soon as the queens were laying in the nuclei, or even before the nuclei could be built up with brood from other colonies that had swarmed. In this method good queens were secured and a rapid increase made. Ten from one could be easily made.

J. K. Williamson said that he could make 25 colonies from one by the nucleus plan, and have them all strong enough to winter; it however required a long season. He usually made his increase on a diminishing honey-flow.

MOVING BEES.

In the process of moving bees Mr. Mendleson used a wagon upon which he could carry 200 colonies, but for long-distance moving it made the load too top heavy, and he usually put on only 150. The springs on his wagon would bear a burden of six tons.

Mr. Brodbeck preferred to move bees in lighter loads and travel faster. He desired to so move his bees as to prevent night travel as much as possible.

SECOND DAY—MORNING SESSION.

FOUL BROOD.

Mr. Mendleson, foul brood inspector for Ventura county, said that the sure-cure remedy was the total destruction of the colony. He had burned a large number of colonies and their hives. There is no chance for an annihilated colony to spread the disease.

Mr. Brautigam had found that foul brood was especially virulent in Napa county, with not much effort to eradicate it.

H. E. Wilder, inspector for Riverside county, said that one cause for the spread of foul brood is in the apathy of bee-keepers. The State law will not allow inspection unless a complaint is made, and bee-keepers are careless about making complaints.

Mr. Cowan said that in England in many districts the bees had all died from the disease. It was virulent because many bee-keepers had no knowledge of the interior of the bee-hive. There were bees in churches and other inaccessible places which were liable to spread the disease. The church bees were being removed, and in this thorough way of treating it the disease was much better under control than formerly. Mr. Cowan believed in destroying the hive and the frames, for a germ of the disease would live in a crevice of a hive for several years, and if at any time it became exposed the colony was sure to become inoculated.

Mr. Mendleson favored a law to prevent the moving of a foul-broody apiary into a location where there was no foul brood. A person in moving bees should be compelled to secure a certificate from the foul-brood inspector, guaranteeing his bees to be in good condition.

It was demonstrated that the disease could be cured if it was handled in a thorough and systematic manner. Mr. Touchton said that the cure should be in the hands of an experienced person, for a remedy in the hands of such a person was all right, but in the hands of a novice it was many times worse than useless. The washes that were recommended were salsoda and lye; the latter would take off paint, and ought to penetrate the most obscure crevices of the hive.

THE BEST BEE-HIVE.

Mr. Brautigam said that the manipulation of bees for the highest profit depended more upon the man than the hive.

Mr. McIntyre used a 10-frame hive, but had recently introduced into his apiary 60 12-frame hives, and prefers them to the 10-frame hives. He thinks that this hive three stories in height will have a tendency to give the queen the highest capacity for brood-rearing, and for the prevention of swarming.

Mr. Hatch said that he had kept bees in Wisconsin, Arizona and California, and had found that if the bee-keeper wants a bucketful of honey he must have a large hive.

Mr. Martin said that he uses the Heddon hive. The regular Heddon hive is made to take eight frames, but he uses ten frames, and finds that by adding stories as the season advances the hive can be enlarged to any desirable size.

HONEY-CANS—SUPER-HOLDER.

Honey-can manufacturers were in evidence with their wares. A Mr. Boyle exhibited tin cans lacquered in imitation of brass. The cans presented a very neat appearance, and in being so treated they did not have the appearance of coal-oil cans.

Some of the bee-keepers advocated that our honey should be put up in 50-pound cans, and two in a case. The present cases, weighing about 135 pounds, are too unwieldy to handle. There was also an inquiry for 10-pound cans.

Mr. Heath exhibited an apparatus for removing the super from a hive and holding it in an elevated position while the queen-excluder or an empty super was being adjusted under it.

After a very pleasant and profitable session in a social way the Association adjourned.

JOHN H. MARTIN, *Sec.*

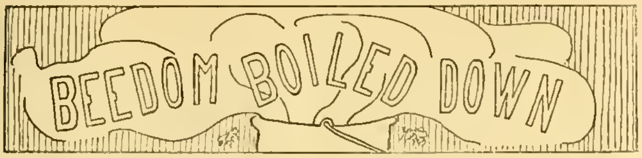
Complete Volumes of 1897.—We have on hand about 40 complete volumes of the American Bee Journal for 1897, which we will mail to any one upon receipt of 60 cents. We also have about the same number of the first six months' copies of 1897, which we will mail for 30 cents. As there were 832 pages of the Bee Journal last year, here is a chance for our new subscribers to get a good deal of valuable reading-matter for a very little money. Better order at once, before they are all gone.

* * *

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

* * *

☞ See "Bee-Keeper's Guide" offer on page 43.



Finding Queens in Bee-Houses is made easier, according to a writer in Magyar Meh, by having a looking-glass arranged on a pivot so as to throw the light of the sun where desired.

* * *

Dark and Light Honey for Winter.—The dark, strong honey of inferior quality that his bees gather in the fall, says Ed Jolley in American Bee-Keeper, is bad for wintering bees in the cellar, but excellent for wintering out-doors, while clover or light honey is excellent for cellar but poor for out-doors. The reason he gives is that the fall honey is strong and aromatic, "and very conducive of heat."

* * *

Foul Brood.—In November, shake one or more colonies of diseased bees on about five combs of solid sealed honey. That's all. Even if some diseased honey is carried away with the bees, if there are no empty cells in which to store it, it will be used up long before any brood is present. But be sure there is no infection in the sealed honey or in the hive. So says F. Alexis Gimmelario, in Canadian Bee Journal.

* * *

Do Bees Injure Grapes?—Prof. Troop, of the Indiana Experiment Station, has been investigating this question afresh. From a Worden grapevine with ripe grapes, all defective berries were removed and a colony of bees enclosed with the vine under mosquito netting, allowing the bees 300 cubic feet of room. The bees soon got used to the confinement, and after three weeks not a single grape had been injured.

* * *

A Good Plan.—D. W. Heise, the man who does some browsing around among other journals for the Canadian Bee Journal, while speaking a kind word for the "Question and Answer" department of this journal, mentions a practice of his that might be followed with profit by those of less experience than Mr. Heise. He reads the question, then settles an answer in his own mind before reading Dr. Miller's answer. In this way a more lasting impression is made.

* * *

Density of Honey.—From the unfinisht report of the convention of the Ontario bee-keepers, in Canadian Bee Journal, it appears there is more or less unripe honey put on the market in that country. samples analyzed at Ottawa showing a range of from 12 to 33 per cent. of water. Agitation for a law is suggested, making the honey fall under adulterated if more than 25 per cent. of water be found present. Prof. Shutt thought 48 to 20 per cent. of water was not far from the average.

* * *

The Ontario Bee-Keepers' Convention.—D. W. Heise says in Canadian Bee Journal that the convention at Hamilton past off with a harmony that must have been bewildering to those accustomed to the stormy scenes of previous years. The editor, however, says that at the last end, when a large proportion had left (probably D. W. among them), they had a repetition of the worst scenes of former years. Which goes to show what an unwise thing it was for Mr. Heise to leave "before meetin' was out."

* * *

Temporary Asphyxiation of Bees.—This is recommended by Le Rucher Belge when for any reason drumming cannot be used to dislodge bees, as in the fall when it is so cool that bees remain stubbornly on their combs in spite of the drumming. Take a wet cloth the size of the hand, sprinkle over it a quarter of an ounce of powdered saltpeter, then roll it up into a cigar shape. It must be prepared in advance, so as to be thoroughly dried. Dig in the ground a hole 6 inches deep, and a little smaller than the mouth of the hive. Cover a good-sized cloth over the hole. Give the bees a little smoke, just to keep them in the hive, and set the hive over the cloth. Pile earth around it so as to make all tight, then light the saltpeter cigar, put it in a smoker, and with the nozzle of the smoker in the flight-hole blow in the sharp smoke. In a few seconds the rag will be burnt up, when the flight hole is to be plugged up. Then comes an intense roaring, a cry of agony that gradually becomes feebler, then the silence of death. With watch in hand wait *exactly* four minutes, in the meantime giving the hive some sharp blows to dislodge any bees that have not fallen. Raise the hive and give the bees fresh air. When the bees begin to stir let them enter the desired hive. In half an hour they will be ready to take flight. Operate toward evening. Two or more colonies thus treated may be united without any precaution.

* * *

Honey for Winter Stores.—The quality of the honey which the bees consume has also a great influence over their health. A good grade of honey, light in color and free from ferment, or of floating grains of pollen, which are often found in dark honey, furnishes an article of diet which leaves but little residue after digestion, and their bowels are therefore not overloaded by their dejections, as is the case if their provisions are composed of dark or unripe honey; or worse yet, of honey-dew, of the juice of fruits such as apples, grapes or peaches, which is sure to work and ferment, and sours in the cells long before the cold weather compels the bees to remain in the hive.—C. P. Dadant, in Busy Bee.

* * *

Experiences in Bee-Keeping.—Bee-keepers' autobiographies seem to be somewhat the order of the day. Gallup in American Bee Journal, Aikin in Progressive Bee-Keeper, and now A. E. Manum starts in to give his 27 years' experience in Gleanings, giving a sort of promise that at the close one will be able to answer the question whether it is "safe for a man with a family to depend upon bee-keeping alone for the support of his family." His bee-fever was contracted through the reading of Quinby's book, which a neighbor forced upon him, and he was soon the possessor of two colonies in box-hives. The first number of his story is mainly taken up with telling what his neighbors' didn't know about bees, and closes like most continued stories with the reader's interest all alert, for he promises to tell in the next about his first crop of honey, which netted him 33⅓ cents a pound in Boston.

* * *

Bees as Weather Prophets.—An article on this topic publisht in Cosmos was thought worthy to be translated for The Literary Digest, and has been copied by the British Bee Journal. The writer says he noticed 40 years ago in old straw hives with two entrances, that about the beginning of October the bees stopt up these two entrances with wax, so as to leave passage for only one bee at a time. He also says that bee-keepers of all countries agree in saying that every time the bees have taken care to seal hermetically the entrances to the hive, so as to leave but a minute passage for air, the winter has been of extreme rigor, while in years when the bees have done nothing to preserve themselves from the cold, the winters have been relatively mild, with no heavy frosts. Just how the bees can tell so surely beforehand the severity of the coming winter, he considers too hard a problem to solve. If this Boiler were not afraid of getting into hot water, he would tentatively suggest that one solution of the problem might be given by saying that the whole affair has no foundation in fact, and that intelligent bee-keepers don't believe the amount of propolis at the entrance has any direct relation to the severity of the coming winter.

* * *

Cross-Breeding of Bees.—In Progressive Bee-Keeper Dr. C. C. Miller, taking a hint from a German writer, figures out what the stock will be if one starts with a black drone and an Italian virgin queen, breeding continuously from the same stock. One might guess that the result would be half-bloods, but a little figuring shows differently. As is well known, the first generation after making this cross a drone will have 100 per cent. of Italian blood and a young queen 50 per cent. Putting the matter in tabulated form, and following it for ten generations, gives the following:

		DRONE.	QUEEN.
1st	Generation	1.00	.50
2nd	"	.50	.75
3rd	"	.75	.625
4th	"	.625	.6875
5th	"	.6875	.65625
6th	"	.65625	.671875
7th	"	.671875	.6640625
8th	"	.6640625	.66796875
9th	"	.66796875	.666015625
10th	"	.666015625	.6669921875

The figures are followed up to the 18th generation with no material difference, only that the numbers in the two columns constantly approximate. That is, if you start with a pure sire and a pure dam, by the time you reach the sixth generation you will have settled that your stock will be two-thirds the blood possest by the dam.

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United States Bee-Keepers' Union.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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EUGENE SECOR, Forest City, Iowa.

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EDITORIAL COMMENTS

Chicago Food and Health Exposition.—As a good many know, such a show embraces the exhibition of various kinds of table food, free samples or "tastes" of which are given to thousands of visitors who call to inspect them. This particular Exposition was under the mangement of the Chicago Journal, one of the daily newspapers here, with a gentleman by the name of A. E. Miller in charge. It was held during the month of October, 1897.

Battery D, on the Lake Front, was the place which was divided into compartments or booths, and the illustration on the first page this week shows the booth we put up to exhibit pure honey. It was in charge of Mrs. W. H. Harris, an estimable Chicago lady, whose likeness is shown in the picture, tho the flash-light with which the original photograph was taken seemed to pretty effectually close her eyes, and give her the appearance of being somewhat sleepy, but that is far from her real disposition.

Perhaps right here we may as well let our friend "Emm Dee" give his impression of the show, after having made a careful inspection:

THE FOOD SHOW.

The exhibition, in Chicago, of thousands of varieties of health-giving foods has been of greater practical interest this year than ever before since its organization. Indeed, the recognized importance of this exhibit has become so fully appreciated by the increasing attendance that it has not only been extended a week longer than the allotted time, but a strong influence is being exerted to hereafter make it one of the great features of an annual industrial exhibition, such as proved so attractive some years ago.

It is impossible to enumerate all the discriptions and qualities of food and other useful articles exhibited at this exposition. Many were of great interest as encouraging, in an inviting manner, the substitution of foods long in use for more healthy and palatable ones. Conspicuous among the gaily-adorned booths was York's honey display, of both comb and extracted honey, presided over by a lady of gentle manners and persuasive charm—Mrs. Harris. Many will know of and appreciate the great value of honey as a food since chatting with the fair saleslady. Editor York is evidently very alive to the interests of the bee-keepers. EMM DEE.

The following paragraph appeared in a local suburban paper, called The Lake Breeze, and publisht where we reside:

"Those who have been so fortunate as to visit the Pure Food Show at Battery D, will not soon forget the honey-booth, and surely will never forget the honey itself. As the proprietor of the honey-booth, George W. York, is a Ravenswood man, it is not strange that Ravenswood has been well represented at the show, and Mr. York and his honey have made many friends there. Mrs. Harris, who has presided over the booth during the show, is also from this suburb, and her friends have not failed to sample the excellent bee-product kept in stock."

Now we might write several pages on our experiment along the line of an attempt to educate the public by wholesale as to the value of pure honey as a daily food. But we can only say here that thousands of people at least for once in their lives knew what it was to taste *pure* extracted bee's honey—a thing to which Chicago people have been almost strangers. We also gave away great numbers of the "Honey as Food" pamphlet, which must result in untold good, provided those who took copies of it will read its truthful contents.

We feel that we did at least something for the future of honey in this city, by our month's exhibit at the Chicago Food and Health Exposition. It was a pretty big undertaking, and financially we can hardly say that it proved a success for us; still, "York's Pure Bees' Honey" became quite well known, and for awhile in Chicago many grocers "caught on" to its popularity, and kept it for sale. Since then country bee-keepers have come in and cut the prices, and the glucose-mixers have also gotten in their criminal work, so that it is quite difficult to try to do even a fairly profitable business in pure honey here. What is needed is a vigorous enforcement of our Illinois anti-adulteration law, and then following up of every grocer with pure honey, both extracted and in the comb.

While our honey exhibit was practically a financial failure to us, yet we believe for the bee-keepers who ship their honey to this market it will eventually prove a good thing, because of the advertisement pure honey received, thus creating a greater desire on the part of consumers for the genuine bee-product.

◆

Call for a Pure Food Congress.—A call for a Pure Food and Drug Congress has been issued, signed by Alex. J. Wedderburn, as Secretary, who is also the special chemist of the Department of Agriculture. It is proposed to hold it March 2, in Washington, D. C. Here is the "call" as printed:

The question of the character of the food, drink and drugs consumed by a people is unquestionably one of the most important that can be discust by them. Adulteration, misbranding, sophistication, substitution, and imitation undoubtedly exist to an alarming extent, to the detriment of health, legitimate business, and sound morals, and it becomes needful to secure legislation that will check this growing evil and permit an honest man to do an honest business.

The extent of adulteration can only be estimated by the number of industries engaged in producing food, drugs and liquors, for no sooner does a legitimate business succeed than illegitimate imitators follow in its wake. These unfair practices have become so general that remedial legislation is demanded to protect the health, morals, and business interests of the people. Our foreign trade is threatened, and unless checkt every honest man will, ere long, be compelled to quit business.

Many of the States have good laws which cannot be enforced, owing to the "Original Package" decision of the Supreme Courts, which prevents the several States from effectually controlling this matter—hence, it becomes necessary to enact a Federal Statute to prevent the Inter-State Traffic in such commodities. House Bill No. 5441, introduced by Hon. Marriot Brosius, of Pennsylvania, is now soon to be considered by the Committee of the House.

As there are divergent views as to some minor points of this measure, which should be reconciled by a consultation of the interested parties, and believing that it is the desire of the great mass of manufacturers, producers and consumers to reconcile all such differences to unite in urging the adoption of a Pure Food Law by Congress, so as to sustain the good name of the Nation, and preserve the health and integrity of our people, therefore, the undersigned hereby call a Pure Food and Drug Congress, to assemble in the city of Washington, D. C., at the National Hotel, at 12 o'clock, m., on Wednesday, March 2, 1898.

Arrangements have been made for reduced railroad transportation and hotel rates, the latter being fixt at $2.00 to $2.50 a day.

Address all communications to the Secretary, A. J. Wedderburn, Headquarters Food and Drug Congress, Parlor 11, National Hotel, Washington, D. C.

By order of the committee.

FRANK HUME,	J. D. HIRD,
MATTHEW TRIMBLE,	BERIAH WILKINS,
WM. C. WOODWARD,	ALEX. J. WEDDERBURN,
R. N. HARPER,	*Secretary.*

Washington, D. C., Jan. 18, 1898.

An appointment of delegates is made in connection with the foregoing call, which embraces, as far as possible, every interest involved in the production, manufacture and sale of food, drug and liquor products—in proportion to the numbers engaged therein. It embraces scientists and health departments, as well as those who have charge of local laws in the various States and Territories.

Of course honey producers are greatly interested in this subject, and we may say that each State bee-keepers' association is authorized to appoint one delegate, and three each by the National and the United States Bee-Keepers' Unions.

As chairman of the Executive Committee, we expect by another week to be able to announce the names of those who will represent the United States Bee-Keepers' Union. We regard it as a very important occasion, and trust that the efforts of the proposed Congress may result in something of great value to the producers of pure food in this country. Just now we believe that there is no other subject that should so concern the bee-keepers of this land.

THE WEEKLY BUDGET

THE LEAHY MFG. Co. reported in a letter sent us Feb. 1, that they were running their factory day and night.

MR. GEO. F. ROBBINS, of Sangamon Co., Ill., has gone to Uvalde Co., Tex., to keep bees. He reports that there are more bee-keepers down there than he ever thought there were anywhere in the same extent of territory.

MR. JAS. A. STONE, Secretary of the Illinois State Bee-Keepers' Association, will read a paper on "Bee-Keeping in Illinois," before the State Farmers' Institute, which meets at Champaign, Ill., the last week of this month.

THE A. I. ROOT Co., writing us Jan. 29, said that altho they had sent out five carloads of bee-supplies that week, they still had on hand orders for ten carloads more. About three or four carloads a week, with the small orders, is about the limit of their factory capacity.

WEDDING BELLS as well as sleigh bells have been ringing at "Rootville" this month, and at least two of the Root-villians are supremely happy. Miss Constance M. Root, daughter of Mr. A. I. Root, was married, Feb. 1, to Mr. A. L. Boyden, one of The A. I. Root Co.'s most faithful and trusted employes. Our heartiest congratulations are hereby extended to the happy pair.

We don't know whether there is any rule about it or not down there among the Roots, but if we remember rightly Mr. Calvert, the business manager, after being in the employ of Mr. Root for awhile, won the hand and heart of his eldest daughter; then, Ernest R. Root did the same thing with one of their charming lady employes—Miss Elizabeth Humphrey; and now Miss Constance captures (or more likely was captured by) Mr. Boyden. And so it goes. But so long as everybody is happy and contented, and each has the "best companion in the world," what more can be desired?

Our congratulations to the Root-Calvert-Root-Humphrey-Root-Boyden-and-A.-I.-Root combination of Roots and Rootlets.

DR. MILLER, in McHenry Co., Ill., writing us Jan. 26, said:

"What a blizzard it was yesterday. We're snowed in. Made no attempt to get farther than the barn yesterday, and we seem quite lost to go a day without the mail. Oh, for free rural delivery! After I get this letter in the envelope, I'll take the cutter and a shovel and see what I can do toward getting to town. At the back door the snow is five to six feet deep."

"LATER.—Feb. 2—9° below zero yesterday; snow 18 inches on a level, but not much of it left level—piled up in drifts and drifting all the time; 9° higher to-day, but as I'm writing without coat or vest, I've no reason to complain."

MR. JOHN A. PEASE, in the Pacific Bee Journal, tries to come a rather bright trick on us by training our own battery on us, by asking us to use the same argument for encouraging the making of new bee-keepers that we used for publishers of new bee-papers. But we fail to see wherein the two can be compared. Good deal of difference in a bee-*keeper* and a bee-*paper*. When a new bee-keeper stops he generally loses only his own money; but a short-lived bee-paper usually loses some money for its subscribers, also, and almost invariably proves of no benefit to its publishers or the public. But Mr. Pease writes very well.

DR. P. C. GRESS, of Atchison Co., Kan., met with a heavy loss by fire Jan. 27. There were destroyed 153 colonies of bees, numerous empty hives, 5,000 pounds of honey in cases ready for market, 100 pounds of beeswax—in fact, everything connected with his well-appointed apiary. The total loss was estimated to have been about $3,500, partly covered by insurance. Dr. Gress had been working 12 years to build up his apiary, and had one of the finest in the State.

REV. E. W. PFAFFENBERGER is the editor of the Western Christian Union, publisht at Boonville, Mo. He has been reading the Bee Journal lately, and in a letter dated Dec. 6, wrote us:

"I am much pleased with your style of editing the Bee Journal. The matter is well and tastefully arranged, and is always pure and wholesome reading......Since becoming acquainted with the Bee Journal we have been eating a good deal of honey at our house."

MR. JOHN H. MARTIN, of Los Angeles Co., Calif., reported Jan. 31, as follows:

"We are having a continuation of dry weather, and the prospects of a honey-yield for the coming season are getting very discouraging. We must have rain, and soon, in order to revive the hopes of the bee-keepers."

MR. A. F. BROWN, of St. Johns Co., Fla., wrote us Jan. 28:

"Another disastrous freeze has visited our State this winter—Jan. 2 and 3—and as a consequence thousands of orange-growers feel extremely 'blue,' myself among them, as my groves are cut back badly."

MR. J. Q. SMITH, of Logan Co., Ill., President of the Illinois State Bee-Keepers' Association, wrote us Jan. 29:

"My bees are wintering nicely on the summer stands packt in leaves."

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Moving Bees into a Bee-House.

I want to move my entire stock of bees into a bee-house. When will be the best time to do it? INDIANA.

ANSWER.—Any time now will do, as they have now been so long in winter quarters that they will be likely to mark their location whenever they fly next. After moving them, try to make the old spot look as different as possible.

Question on a Bee-Repository.

I have read your answer to my question, on page 38, and notice what you say about the repository which I have put up after a plan given in the "A B C of Bee-Culture," page 327, where Mr. Root says that he and a neighboring bee-keeper used buildings constructed very much the same as mine, only I thought that I would make a sure thing of it, and where they had 8 inches of sawdust I had 15, and a two-inch air-space inside. The bees have wintered in them successfully. The way I understand, the loss was in putting them out too early in spring.

If these buildings were not put up the right way, please give a plan for a repository where we could winter bees successfully nowadays.

In my question on page 38, where it reads, "then another wall of four-inch boards," it should read—then another wall of four inches, with boards and paper on both sides. WISCONSIN.

ANSWER.—I don't find what you refer to in "A B C of Bee-Culture," and probably have not the same edition. But I very much doubt that bees will winter successfully in such a building above ground unless there is some way to warm it up when it becomes too cold. If entrances were allowed, so the bees could fly out every time the weather permitted, the case might be different. I must say, however, that I have had no personal experience in the matter, and will gladly yield the floor to any one who has.

Boring a Well near a Bee-Cellar.

I would like to have a well bored close by the house, but I fear it might disturb the bees in the cellar. WISCONSIN.

ANSWER.—I think I'd go ahead whenever it suited best. I very much doubt whether it will make any difference to the bees.

Moving Bees by Railroad—Wintering in Cold Climate—Out-Apiaries.

1. I am thinking about sending a colony of bees on a chartered emigrant car to my son living in North Dakota. They are in an 8-frame dovetail hive. How can I best prepare them for the trip? I suppose I would send them about the last of March, or the first of April.

2. Would eight frames hold enough stores to winter a colony in that climate? It is said they would be confined to the hive in some seasons from Nov. 1 to Apr. 1 without a flight.

3. In such a climate could they be wintered out-doors, by proper packing? If so, how should they be packt?

4. I am getting a little interested in out-apiaries, having about as many colonies as can be profitably kept in one yard, where neighbors have bees all around, but I have no experience in out-yards at all, and there is no one near me who has, whom I can consult. Can you not give us an article on it? ENQUIRER.

ANSWERS.—1. As the frames in dovetailed hives are self-spacing, the only thing to do with them is to see that they are wedged up firmly at the side. Fasten the entrance with wire-cloth, secure the bottom to the hive, and cover the entire top with wire-cloth, removing the cover. A good plan is to make a frame an inch or two deep just the size of the top of the hive; cover this frame with wire-cloth, and fasten securely to the hive. A good way to fasten the bottom on the hive is by means of what are called tobacco-staples, 1¼ or 1½ inches wide, with legs about ¾ inch long. Set the hive in the car so the frames will run the same way as the rails of the railway. Don't set a cook-stove on top of the wire-cloth.

2. An 8-frame hive will hold all the honey needed. But it needs closer watching than a 10-frame hive, to make sure that enough honey is present at the beginning of winter.

3. Probably packing all sides but the front with some kind of packing at least two inches thick would answer. Better consult, if you can, those who have wintered successfully right on the spot.

4. If you have any thought of starting an out-apiary, it will be worth while for you to consult Root's "A B C of Bee-Culture," where the whole subject is very fully treated, occupying about eight pages, and in Gleanings for 1889, commencing with Feb. 1, is a series of articles in which I gave very fully what I knew about out-apiaries.

Starting with Bees—Wintering in Bee-House.

I started in with a glass hive in the house, to see the bees work, and two colonies in an orchard to help fertilize the fruit blossoms. We caught a stray swarm one Sunday afternoon, then, fool-like, divided the one in the house, also those in the orchard. It was a very poor season, only one day during basswood bloom, in which bees could fly. I found one colony nearly starved, and gave them all the honey the others had stored. I got only three or four sections, and then had to buy 80 pounds to winter them on.

I now have seven colonies, all strong, and I think they have enough honey to carry them through the winter, if they are only economical with it, and they generally are, I believe. I built them a nice house, 8x16 feet, facing south, with place for two tiers of hives, eight in each story. They are packt nicely, the top of the hive being filled with straw. They have no ventilation. Do they need any? The face of the hive is exposed to the sun and weather. I find a good many dead bees in front of the hives, and on the snow where they have fallen while flying during sunny days. The openings are about 1¼ inches long by ¼ high. NEW YORK.

ANSWER.—Your arrangement will probably work all right, only 1¼x¼ is too small an entrance for winter and very much too small for summer. Better wedge up each front corner ¼ inch. See that the dead bees don't clog the entrance. Take a heavy wire with one or two inches bent at right angles at the end, and clean them out. But don't be alarmed at finding a good many dead bees on the ground. Bees are dying off all the time, and make quite a show on the white snow. It is generally recommended, however, to scatter straw on the ground at such times as bees may come out to fly when the ground is covered with snow, covering it for a few feet around. When the air is too cold for the bees to fly, say at 40°, bees are tempted out sometimes by the very bright sun shining in the entrance, and at such times it may be well to put a board before the entrance to keep out the sun.

A Beginner's Questions.

Last spring I had three colonies of bees, but one of them died. I am a carpenter by trade, and about May 1 I went to build a house some 30 miles away from home, so I left the tending of the bees to my wife. Of course they swarmed. My wife, with the aid of a neighbor, succeeded in hiving two of the swarms. Everything seemed to go all right, but in about three days one of the old colonies came out, but she could not make them stay. They were hived twice, but left. In about three days the other old colony sent out a swarm, but my wife could not make them contented, and they finally left. The hives used were some old ones that I got from a friend. They have eight frames in the lower part, but did not have on any sections.

Now the four colonies which I have left seem to be all right. One of them is in a hive 12x12 and 30 inches high, with two honey-boxes of about 10 pounds each. I opened the door in front of these boxes, and the comb in them is almost empty, but I can't tell how the bottom is, altho it seems to be heavy. Must I feed them? Two of the hives are of the 8-frame kind, but there is no place on top to put any feed. There are eight frames, and then a board for a cover. Will it do any harm to take the board off and put a box on to put feed in at this time of the year? The hives all stand on the east side of the house, with loose boards to cover them, but the bees seem to be all right.

There is one more hive which is only a box 12x18x12, with two sticks across. This I can't look into at all, altho it seems to be quite heavy. They seem to be all right, but they may not have enough to last all winter. I did not rob them during the summer.

What do you think is the best hive? KANSAS.

ANSWER.—The probability is that your colonies don't need any feeding. The box-hives are very large, and as you took nothing from them they had abundance of room to store enough for winter and to spare if the season was at all favorable. If they are heavy, as you say they are, they likely have 30 pounds or more of honey, and may be safely left. If I understand you correctly, they put honey in the boxes, then emptied it out, strong evidence that they have a good store below. The 8-frame hives are all right if hives and all weigh 45 or 50 pounds. Of course they are not so heavy now as at the beginning of winter. If you think they are not heavy enough, it will do no harm to take off the cover and put on a box with some comb honey in it, covering it up warm.

It's doubtful if anything is better than the dovetail hive.

Moving Bees—Putting on Sections.

1. I have bought 10 colonies of bees, which I wish to move two miles. They are on the summer stands with supers on. When would be the best time to move them?

2. When is the best time to put on sections in the spring? Would the queen lay in them if put on too soon? IOWA.

ANSWERS.—1. At the distance of two miles you can move them at any time, but it will be better to wait till spring, so it will be warm enough for them to fly every day. It will stir them up to move them now, so that diarrhea might be induced, unless a warm day should come right after moving them.

2. The queen is not likely to lay in them if put on too soon, but they will keep nicer and fresher off the hive. Put them on about a week after you see the first clover blossom, or as soon as you see bits of white wax along the upper parts of the brood-combs. But don't rely too much on the white wax business, and it is better to get them on too soon rather than too late.

Honey Granulation—Moving Bees—Cutting and Putting Foundation in Sections.

1. What are the causes and conditions that make honey granulate? Is there any preventive?

2. Is now a good time to move bees a short distance? They have not been flying for about eight weeks.

3. Is it all right to put foundation in sections now for next season? If so, how do you keep them?

4. In putting full sheets of foundation in 4¼x4¼ sections, what size are they cut, and how many sides of the foundation are fastened to the sections? NEW YORK.

ANSWERS.—1. There is a very great difference in honey as to granulating, some kinds almost never granulating, and some kinds granulating before it leaves the hives. I don't know any reason for this any more than the difference in honey coming from different flowers. Honey that is very ripe and thick is slow to granulate. Cold, especially freezing cold, hastens granulation. Stirring, or agitation of any kind, hastens granulation. It has been supposed that one reason why extracted honey granulates so soon is because of the thorough agitation it gets during the process of extracting.

From this you may learn that you will retard and in some cases prevent granulation if you leave it on the hives till the close of the harvest, when it is sealed and well ripened, and keep it in a place where it may be as warm as possible. Some recommend heating it up to 160° and then sealing it up, as in canning fruit.

2. Yes.

3. A few bee-keepers say they don't want foundation in sections till about the time they are to be put on the hives. I have not discovered any material harm from having them ready several months or a year in advance. As fast as foundation is filled in my sections the sections are put in the supers and piled up in the shop.

4. Generally they are cut 3⅞x3⅞, and fastened only at the top.

Drone-Brood and Watering Bees in Winter.

1. Here I am again. Well, I carried the five box-hives into the cellar the evening of Nov. 30, and all is fine. I have watcht them very closely and find them very quiet at 45° or 50°, which I can regulate easily. I often take a lamp and peep in where the hives of bees are. One time between Christmas and New Year I noticed young white drone-brood on the alighting-board. This hive cast an after-swarm in September, and while removing sections from this hive I happened to find the young queen on top of the brood-combs, and in between my thumb and finger her wings were caught and clipt. I have seen worker-brood late in October. Why do they rear drone-brood as early as this in the cellar? Also, they don't allow me to come in their parlor department with a lamp, for when I stay in for a moment there will be one rousing buzz, and the best is to stay out. The dead bees are dragged out, but few so far. I have eight colonies in this curtained-off department.

2. The three colonies 20 miles away are not packt, and all these at home are. I find more dead bees with those 20 miles away. They or we have had no zero weather so far. They all have plenty of stores. Do you think the packt ones will winter out best? Bees had several good, brisk flights.

3. Would you supply these cellar-bees with water toward spring, by dipping a sponge in water, and lay the sponge on the alighting-board? or would you leave them alone?

PENNSYLVANIA.

ANSWERS.—1. I don't know why there should be drone-brood in a hive between Christmas and New Year, unless the hive is without a proper queen, and even in that case one would hardly expect to find brood present. As the hive was cellared Nov. 30, it is barely possible that the brood is from eggs laid just before being taken in the cellar, for it may have been lying at the entrance a few days when you found it. Better keep a sharp lookout for that colony in spring.

2. It is quite likely the packt colonies will come out best.

3. At one time I tried to give my bees water in the cellar, but never succeeded in getting them to take any. In this country I don't know that any one practices watering his bees in the winter, but the Germans have a good deal to say about the winter thirst of bees (durstnoth). Whether bees are likely to be more thirsty in the German language I don't know. At any rate you better not fool with watering more than one colony till you see that the bees will take the drink.

50c worth of Books for 1 new Name.

Send us $1.00 with a new name for the Bee Journal for 1898, and we will mail you your choice of the list below, to the value of 50 cents.

We make this offer only to those who are now subscribers; in other words, no one sending in his own name as a new subscriber can also claim a choice of this list:

50 copies "Honey as Food"	50c.
Wood Binder for the Bee Journal	20c.
50 copies of leaflet on "Why Eat Honey?"	20c.
50 " " on "How to Keep Honey"	20c.
50 " " on "Alsike Clover"	20c.
1 copy each "Preparation of Honey for the Market" (10c.) and Doolittle's "Hive I Use" (5c.)	15c.
1 copy each Dadants' "Handling Bees" (8c.) and "Bee-Pasturage a Necessity" (10c.)	18c.
Dr. Howard's book on "Foul Brood"	25c.
Kohnke's "Foul Brood" book	25c.
Cheshire's "Foul Brood" book (10c.) and Dadants' "Handling Bees" [8c.]	18c.
Dr. Foote's Hand-Book of Health	25c.
Rural Life Book	25c.
Our Poultry Doctor, by Fanny Feild	25c.
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Turkeys for Market and Profit	25c.
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Ropp Commercial Calculator No. 1	40c.
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Kendall's Horse-Book [English or German]	25c.
1 Pound White Clover Seed	25c.
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½ " Alsike " "	25c.
1½ " Alfalfa " "	25c.
1½ " Crimson " "	25c.
The Horse—How to Break and Handle	20c.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all others possible to subscribe for it. See offers on page 71.

GENERAL ITEMS

Great Deal of Rain.

I am trying to prepare for a fine honey-flow next summer. We have been having a great deal of rain, which I imagine will be good for next season's clover.

Erie Co., N. Y., Jan. 31. E. W. BROWN.

One or Two Glasses in an Extractor.

In answering a question on page 53, Dr. Miller says: "It is doubtful if a second glass would be any improvement."

I differ from this opinion. Some 20 odd years ago, while at work devising and making a solar wax extractor that would do practical work, I experimented with and afterwards used both single and double glasses, with the result that I used double glass altogether for the last few years I was in Iowa, and should still use them were I keeping bees in any of the Northern States. If one wishes to get all the work possible out of an extractor, I think it will be well to use double glasses.

Dade Co., Fla. O. O. POPPLETON.

A Little Girl Reports.

There was no honey to amount to anything last year, as in the spring everything was frozen down, and in the fall it was very good for a few days, but it was just long enough to get the bees good and strong for winter. I had only one colony in the spring when I wrote my last letter, and in the summer I had a new swarm, and now I have two colonies. My first colony swarmed just in the right time to get good and strong for next summer's work, if there is anything for them to work on. Pa says that they are fixt up better this winter than he has ever had them since he has kept bees. We fed them 400 pounds of sugar in the fall to get them ready for winter. My bees were carrying in water and pollen in the middle of October.

Pa says that my bees are the gentlest bees we have among our whole 75 colonies. We had only 60 colonies, spring count, and increast to 75. It is more than we have had for a good many years. In the honey season pa has them tiered 3 and 4 stories high, according to the strength of the colony; but pa put them on, and when he got ready to take them off he was fooled sure, because there was nothing in them.

I think it is a very nice business to keep bees. It is nice to work among them in the summer time. We had to work after night to take our honey, and it workt like a charm.

I guess I will close for fear this will be put into the waste-basket, and not be put into the Bee Journal at all. I am 11 years old. EMMA BANKER.

Brown Co., Minn., Dec. 22.

No Honey to Spare.

I have 14 colonies of bees in the cellar, and they are very quiet. The temperature is 42 degrees. I had 13 colonies last spring, and there were 4 swarms during the summer, 3 of them I hived, and the fourth, after trying for two days to hive them, were sent back to the hive they came from. They were Italians. The rest of my bees are all blacks or hybrids. One colony in the spring was robbed. I think they must have been queenless. Another was robbed in the summer. The super was taken off and emptied, and left. I know pretty well where it went to, but I did not take any pains to look it up. A third colony the bees robbed, when I went to it, supposing it was all right, I found neither bees nor honey. Another, when I was making a general examination, I found the worms had taken full possession, and it was not many days before that I had examined

Only 6 cts. per Pound in 4 Can Lots or Over.

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IT SELLS ON TASTING.

The Honey that Suits All Who Buy It.

We can furnish **White Alfalfa** Extracted Honey, in 60-pound tin cans, on board cars in Chicago, at these prices: 1 can, in a case, 7 cents per pound; 2 cans in one case, 6½ cents; 4 cans (2 cases) or more, 6 cents. The Cash MUST accompany each order.

☞ A sample of the honey will be mailed to an intending purchaser, for 8 cents, to cover postage, packing, etc. We guarantee purity.

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Is a 28-page monthly bee-journal publisht at Higginsville, Mo.—price 50 cts. a year. With the year of 1898, we begin the eighth volume, hence it is past the experimental stage. **R. B. Leahy** and **G. M. Doolittle**, editors. Some of the features of 1898 will be a continuation of "**Wayside Fragments**," by **Somnambulist**. "**Experience and Its Lessons**," by **R. C. Aikin**. This series of articles will be reviewed by Mr. Doolittle, which is practically giving *his* experience with its lessons. "Experience and Its Lessons," as reviewed, will be a gold-mine for beginners and advantageous to those more advanced in bee-culture. The somnambulist articles are written in a pleasing style, as none but "Sommy" could write them. They are highly entertaining and instructive. **Dr. C. C. Miller** and other popular writers also contribute to its columns. The PROGRESSIVE is a popular journal at a popular price. Printed in the highest art, on beautiful paper. Fearless in its character, newsy in its contents, and artistic in its make-up. Remember the PROGRESSIVE BEE-KEEPER is but 50c. a year. The PROGRESSIVE and that "one only" book for beginners, the **Amateur Bee-Keeper**, by **Prof. J. W. Rouse**, both for 65c. A sample copy of the PROGRESSIVE for your name, and a beautiful, illustrated catalog of apiarian supplies for the asking. Address,

LEAHY MFG. CO., Higginsville, Mo.

them all, or took off the covers, and everything had the appearance of being all right.

My colonies are all heavy; about 4 had a little spare honey, and the rest have all they gathered, and that was no more than the law allows. People must look to some other quarter than Minnesota for spare honey this winter.

My bees have been uglier the past season than I supposed it was possible for them to be. What little honey they stored they mixt in with pollen, as tho it was done on purpose for the millers to work on. Pollen makes a millers' paradise.

J. V. B. HERRICK.

Hennepin Co., Minn., Jan. 4.

◆

Unite to Down Adulteration.

I am glad to see that the bee-keepers of the United States have seen fit to have grit enough to raise a voice against the burden of adulteration. I see by the Bee Journal that there are so many bee-keepers who are farmers, and as I am a farmer myself, I think if farmers and bee keepers could only bring their heads together as a body, and bring this dreadful adulteration business to a higher point in the minds of the people, I firmly believe that something could be done. We know there is no class of people that is defrauded more than the farmer and the bee-keeper, for they try to raise a pure article for an honest living, and for the welfare of the masses of the people, but they are headed off by adulteration or imitation. The farmer is the victim of adulteration from the fertilizer he buys to raise his crops with down to the pepper he uses on the table; and the bee-keeper is cheated on every hand. Fellow-men, let us put the brake on that destructive wheel.

GEORGE SAGE.

Greene Co., Ind., Dec. 24.

◆

A Good Year for Honey.

The past was a good year for bees in this part of Iowa. My bees came out of the cellar in good condition. Three starved to death in the cellar, and one spring dwindled. It was the worst spring for robbing I ever saw. I had to cover lots with hay. The best way I have found to stop robbing is to cover the hive with a sheet, and occasionally turn it.

It paid last year to send South to get 50-cent queens. The colonies of the queens I got from there did not swarm. From several of them I got 168 sections of honey, and from the best of my own I got a little over 100. I got 11,000 pounds of honey, 1,700 being comb and the rest extracted. I think that is pretty good from 89 colonies in the spring and 138 in the fall. The mistake I made was leaving my fall honey to extract late in the fall, only finishing extracting Dec. 16, and it was candied badly.

I always winter my bees in the cellar, and in cold weather I always have a fire over them night and day. The chimney comes from the bottom of the cellar, and has a six-inch hole in it for ventilation. I put one-inch blocks under the front of the hives to raise them from the bottom-boards. I never lose a good colony unless they starve to death. CHAS. BLACKBURN.

Buchanan Co., Iowa., Dec. 18.

◆

Report for Last Season.

I had nine colonies last spring in the Higginsville hive and three in box-hives. I increast to 18 by natural swarming, and extracted 1,200 pounds of nice honey, with 300 pounds of comb honey. My bees did well. We had a drouth which cut off the fall flowers, or I would have gotten a larger yield. My bees were in good condition to go through the winter. I have them packt on top, on both sides and one end, with the open fronting southeast. I have no cellar, so I winter them on the summer stands.

I have been taking the Bee Journal for a little over a year, and I owe my success to it in managing my bees. I would not be without it for double its cost. I hope the United States Bee-Keepers' Union will be a success. I would like to see the two Unions united. I think they could do better work, as it would be stronger and better able to fight the enemies of the pursuit.

W. S. SMITHEY.

Monroe Co., Mo., Dec. 20.

◆

Bee-Conventions and Fairs.

I do not want to be clast among the critics, but I noticed the report on page 821 (1897), by J. P. West, President of the Minnesota Bee-Keepers' Association, that met in St. Paul, Dec. 8, 1897, one day and then adjourned. Well, perhaps they did the right thing to decide to meet in St. Paul the same time that the State fair meets, but at the time of the fair you will find that you must neglect either one or the other. To have your exhibit will be all right, but to have a convention at the same time you will find that you will neglect both. As Mr. West says, a great many members are horticulturists; very true, and that is the very reason they cannot do justice to both. As far as the reduced rates are concerned, that part is all right. It is a better season of the year, I will acknowledge, but we had an experience with the Southern Minnesota Bee-Keepers' Association; we appointed the time of meeting at the same time the

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BEE-KEEPERS! Let me send you my 64-page Catalog for 1898.

J. M. Jenkins, Wetumpka, Ala.

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Street Fair in Winona was held last fall, and the result was that we unanimously decided that we wanted no more conventions at the time of a fair.

In the first place, those very men that are interested in horticulture and bee-keeping are bound to neglect one or the other, and the one that they neglect is the convention. Such was our experience. Men that at other conventions would be on time and the sessions were too short for them, during the fair they would come in the convention, stop a few minutes, and then they were absent for the rest of the day; then the man that has bees, honey, tools, and supplies on exhibition can put his time in at his place of exhibit, in answering questions, as there is nothing that attracts the attention of the sight-seers as an observatory hive with a colony of bees in it. There are so many that never saw the inside of a bee-hive, and when they see the bees and honey they become perfectly excited. I had on exhibition a hive with glass sides and top, with screen front, and one man was not able to answer all the questions that were askt about the bees. I had a hive standing by the side of it, but empty, just to show the condition the hive was in when the bees took possession of it, but I could only be present until 8:30 in the morning, and then half an hour at noon, and about the same time in the evening. Thus you see we had to neglect the fair in order to transact the business of the convention.

The fairs and exhibitions are all right, but my experience is that they do not work well together, for when you get too many irons in the fire some of them are bound to get too hot.

I could not think of doing without the Bee Journal, and would advise all bee-keepers to subscribe for it; I often find one article that is worth more than double the year's subscription.

I put 31 colonies into winter quarters, and they seemed all right before putting them away. I took a scales on a wheelbarrow, and went through my apiary and weighed every hive and markt the weight upon the hive, and in the spring when I put them on the summer stands I will weigh them again. By so doing I will ascertain what amount of honey they will have consumed.

We are preparing for next season, getting everything in shape; also for the Southern Minnesota Bee-Keepers' Association, which meets Oct. 22 and 23, 1898. I have been stirring up our members to prepare their little speeches for that occasion, as the long winter nights give us plenty of time to think and write, and every bee-keeper should improve the opportunity.

E. B. HUFFMAN.

Winona Co., Minn., Dec. 30.

Fine New Hampshire Honey.

I must have the Bee Journal. I would not want to go without that and try to keep bees. The experiences of others are a great help to me.

I had nine colonies in the spring of 1897, and have 17 now. I had 265 sections of as fine honey as New Hampshire can produce. I sold over 150 for 18 and 20 cents each.

I love my bees, but what kind they are I have yet to learn. There is no particular honey-plant around here.

MRS. RUA A. FIFIELD.

Cheshire Co., N. H.

Worms in Honey—Laying Workers.

Perhaps this may be the last year that I shall be able to take the Bee Journal, for the reason that I am not able to care for my bees properly, on account of my age. My next birthday, if I live until then, I shall be 88 years old. I shall have to give it up for my health is poor, not able to care for them properly. I am able to do but little work of any kind. If I live this will be the last year that I shall try to keep bees. I have kept them over 50 years, and have taken the Bee Journal the most of that time.

I have read of some complaining about worms getting in their honey after it was taken from the hives. When I take honey from the hives, for several years, I have kept it in a small room. I get a number of stalks of green tansy, and spread it on the floor, then put the cases of honey on the tansy. I have not found any worms or ants on my honey for a number of years. This may be of some use to young bee-keepers.

All the way that I can tell when there is a laying worker in a hive is by the number of eggs in a cell. When I find that, I find no queen. My hives are all numbered. For instance, there is a laying worker in No. 1, and Nos. 10 or 20 are good, strong colonies; I take No. 1 and set it where No. 10 stood, in the middle of the day when the bees are flying well, and change places of the hives. When the bees from No. 10 come in from the fields they go into No. 1. They kill the laying worker. I have gotten rid of 5 laying workers in this way in about two hours. This may be of some benefit to some new bee-keepers.

WM. C. WOLCOTT.

Winnebago Co., Wis.

Second Wintering Experience.

I am very much interested in the American Bee Journal. I can hardly wait for Friday morning to come, as that is the time for it.

This is my second wintering of bees. I now have five colonies; I had three colonies in the spring, transferred all, had two swarms, and got about 100 pounds of comb honey.

NORMAN O. JARVIS.

Madison Co., N. Y.

Bees Did Well.

Bees did well here in swarming as well as in honey-gathering. They nearly doubled by natural swarming. Some of the swarms produced as high as 50 pounds of honey. Of fall honey we got none, as the dry weather put an end to all honey-gathering. The fall of 1896 was the best we had since the pioneer days of this country. Honey-gathering held out splendidly until really natural ripeness put slowly an end to all flowering of plants.

FRANK HENTRICK.

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1A26t WALKER, Vernon Co., MO.
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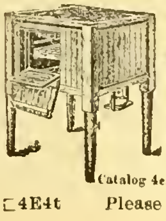

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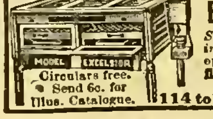

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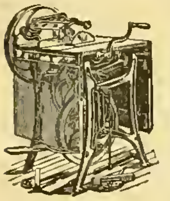

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Bee-Keeper's Guide—see page 92.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Ill., Feb. 1.—Fancy white, 11 to 12c. No. 1, 10c.; fancy amber, 8 to 9c.; No. 1, 7c.; fancy dark, 7c. Extracted, white, 5 to 6c.; amber, 4 to 5c.; dark, 4c. Beeswax, 26 to 27c.

The demand for comb honey is not satisfactory, and it can be bought at even lower prices than quoted, where it is not in the hands of regular dealers. There seems to be no outside demand. Extracted without special change. Beeswax is scarce.

Milwaukee, Wis., Jan. 24.—Fancy white 1-lbs., 11 to 12c.; A No. 1, 11 to 11½c.; No. 1, 10 to 11c.; No. 2, 8 to 9c.; No. 1 dark, 8 to 9c. Extracted, in barrels, kegs and cans, white, 5½ to 6c.; dark, 5 to 5½c.

The supply of honey is good and the quality very nice as a general thing. The demand is not up to our desires, yet we are hopeful it will improve and all will be wanted at fair value. We feel like sustaining prices, and continue to quote as above.

Cleveland, Ohio, Dec. 15.—Fancy white, 12 to 12½c.; No. 1, 11 to 12c.; No. 1 amber, 9 to 10c. Extracted, white, 6 to 7c.; amber, 4 to 5c. Beeswax, 22 to 25c.

New York, N. Y., Dec. 22.—Fancy white 11 to 11½c.; off grades, 9 to 10c.; buckwheat and mixt, 6½ to 7c. Extracted, California white, 5 to 5½c.; light amber, 4½ to 4¾c.; white clover and basswood, 5 to 5¼c.; buckwheat, 4 to 4½c.; Southern, 50c. a gallon. Beeswax is in good demand at 25 to 27c.

Our market remains quiet. Fancy grades of white comb are about cleaned up, and these would find sale on arrival at quotations. We have a large stock of buckwheat, mixt, and off grades of white, and, as the demand for these is very light, we cannot encourage further shipments for the near future. Extracted of all kinds is selling fairly well.

Minneapolis, Minn., Jan. 31.—Market is in an overloaded condition on comb honey. Good chance for fancy white extracted at 5¾ to 6c., but comb is at a standstill, particularly if other than fancy white. Best price available on fancy white comb is 10½c., and buyers are slow at that. Darker grades or broken lots are unsalable. If shippers would send in their extracted when it is wanted, and not push undesired comb [and vice versa] the stuff would move more advantageously to all concerned. The trouble is, when a fair price is obtainable some shippers hold out for more and in the end lose by it.

Buffalo, N. Y., Jan. 14.—Strictly fancy 1-pound comb honey is more active at mostly 10c., occasionally 11c., but all other gradas are dormant and have to be cut to almost any price to move them, ranging from 8c. down to 5c. Extracted is also very dull at 4 to 6c. We cannot recommend the shipping of honey here unless it is strictly fancy 1-pound sections.

There is no selling pressure of consequence on desirable lots of water white, either comb or extracted, such being held as a rule at full quotations. Amber grades are in greater supply than the demand, and market for this class presents an easy tone. Dark qualities are in poor request, despite low asking figures. Beeswax is firm at current quotations, with very little offering, either from first or second hands.

St. Louis, Mo., Jan. 17.—We quote honey nominal, but very little selling. Demand is light. White comb, 1-lbs., 10 1-2 to 12c.; amber, 8 to 10c.; dark, 5 to 7c.; broken comb, 4 to 7c. Extracted, in cans, white, 5¼ to 5 1-2c.; light amber, 4¾ to 5c.; amber, 4¼ to 4 1-2c.; dark, 3 1-2 to 4c. Beeswax, 25 to 25 1-2c. To sell honey in lots above prices would probably have to be shaded a little.

Detroit, Mich., Feb. 1.—Fancy white, 11 to 13c.; No. 1, 10 to 11c.; fancy amber, 9 to 10c.; No. 1, 8 to 9c. Darker grades are selling lower and in better supply, and can be bought at 6 to 7c. Extracted, white, 5 to 6c.; darker grades, 4 to 5c. Beeswax is in good demand at 26 to 27c.

Indianapolis, Ind., Jan. 15.—Fancy white, 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand.

Kansas City, Mo., Jan. 20.—Fancy white, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c. The market is well supplied, and demand is light.

Boston, Mass., Jan. 18.—Fancy, in cartons, 12½ to 13c.; in glass, 11 to 12c.; A No. 1, 10 to 11c.; No. 1, 9c.; No. 2, 8c.; No. 3, no sale. Beeswax, 27c.
The demand for honey is light on all grades, with a full supply. Pure beeswax is in good demand, but supply is light.

Philadelphia, Pa., Jan. 18.—Fancy white, 10c.; No. 1, 9c.; amber, 8c. Extracted, white, 5c.; amber, 4c.; dark, 3¾c. Beeswax, 28c.
Late arrivals of California honey have demoralized our market.

Cincinnati, Ohio, Jan. 17.—There is no change in prices, but rather a slow demand for all kinds of honey. We quote 10 to 13c. as the range of prices for best white comb honey, and 3 1-2 to 6c., for extracted, according to quality. Beeswax is in fair demand at 25 to 27c. for good to choice yellow.

San Francisco, Calif., Dec. 8.—White comb, 1-lbs., 7½ to 9½c.; amber, 4 to 6c. Extracted, white, 4½ to 4¾c.; light amber, 3½ to 3¾c.; dark tule, 1¾ to 2¼c. Beeswax, fair to choice, 22 to 24c.

List of Honey and Beeswax Dealers.

Most of whom Quote in this Journal.

Chicago, Ills.
R. A. BURNETT & CO., 163 South Water Street.

New York, N. Y.
HILDRETH BROS. & SEGELKEN.
120 & 122 W. Broadway.

Kansas City, Mo.
C. C. CLEMOMS & CO., 423 Walnut St.

Buffalo, N. Y.
BATTERSON & CO., 167 & 169 Scott St.

Hamilton, Ills.
CHAS. DADANT & SON.

Cleveland, Ohio.
A. B. WILLIAMS & CO., 80 & 82 Broadway.

Philadelphia, Pa.
WM. A. SELSER, 10 Vine St.
Mr. Selser handles no honey on commission

St. Louis, Mo.
WESTCOTT COM. CO., 213 Market St

Minneapolis, Minn.
S. H. HALL & CO.

Milwaukee, Wis.
A. V. BISHOP & CO.

Boston, Mass.
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M. H. HUNT, Bell Branch, Wayne Co., Mich.

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Albany, N. Y.
CHAS. MCCULLOCH & CO., 380 Broadway.

Cincinnati, Ohio.
C. F. MUTH & SON, cor. Freeman & Central Avs.

All for the Fruit-Grower.—After a careful examination of the 1898 catalog issued by Reid's Nurseries, Bridgeport, Ohio, we wish to say that it is one of the most complete catalogs (devoted entirely to the nursery), tastily arranged and illustrated that come to our desk. There are no catch-penny schemes in it, but it is sound business from cover to cover, nothing over-drawn, but the plain truth boiled down, and beautifully illustrated with many costly engravings. They have done away with the highly-colored covers, that are now being sent out, and instead they have opened the way to a new field, giving their customers something of art and beauty—something that is new and refined. If you need anything in the nursery line, send your name and address for their catalog, not forgetting to mention that you saw their advertisement in the old American Bee Journal.

FREE —A Copy of— **Successful Bee-Keeping,** by W. Z. Hutchinson; and our 1897 Catalog, for 2-cent stamp, or a copy of the **Catalog for the Asking.** We make almost **Everything** used by **Bee-Keepers,** and at **Lowest Prices.** OUR

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38th Year. CHICAGO, ILL., FEBRUARY 17, 1898. No. 7.

CONTRIBUTED ARTICLES

Sweet Clover—An Occasional Forage-Plant.

BY PROF. A. J. COOK.

The note of reproof from the editor, on page 25, regarding my statement in reference to melilot only gives me pleasure. I am glad to have my position criticised, at all times. If I am wrong—and we all make frequent mistakes—I wish to be corrected, and the correction cannot be too speedy or too thorough. If I am correct, another's errors will be likely to be corrected. Thus candid, courteous criticism is always in order. Any other kind is always to be deeply regretted. How common were harsh criticisms, bitter aspersions, and sharp, cruel, cutting invective in the olden time of American bee-culture. Happily it is now rare. We can almost always criticise kindly, reprove gently, and after such criticism and reproof are none the less friends. Thus, Mr. York and I are none the less friends, tho he so sharply questions my act.

I have noticed all the recent words of commendation regarding sweet clover in the several journals. That occasional cases of cattle and horses eating melilot clover may occur I do not doubt. Frequent statements to that effect may have been made, and I am always slow to impeach another's veracity in such case. Cattle and horses may be crowded by hunger to eat what is really distasteful and unappetizing. In all such cases the food is of doubtful value.

Again, melilot may be grown on exceptional soil, or under exceptional conditions which may be more appetizing. If this be true, we may believe it exceptional. Usually the quality of sweet clover does not attract any of our stock. I still believe that melilot, while it is excellent for honey has little value as a forage plant. It has one other value. It is a legume, and so takes nitrogen from the air, through the aid of the nitrofying microbes. It is thus valuable for green manuring. I wisht much to find this plant valuable for hay and pasture. I have often seen it in pasture and by roadside, left wholly undisturbed by horses, cattle, etc.

Again, white melilot is strictly, so far as I have observed, a biennial. It grows vigorously for one season, storing up starch to push its growth and development the second season, when it blooms and forms the seed. The first year the stems and foliage are tender and succulent, and, were they savory, would furnish much good feed. But this would be of no use to bees, as the flowers do not come till the next season. The second season, the stalks are coarse and large, and would be of little or no use for pasture or hay. Yet, now the bloom comes with sweet scent and big load of nectar. This again would discount the value of sweet clover except for honey and green manuring, even tho it were appetizing.

The yellow sweet clover here in Southern California appears to be an annual, to grow vigorously, and tho of doubtful value for hay and pasture, may prove to be valuable for trapping nitrogen, and enriching the soil.

The objection urged to melilotus alba in the above remarks, applies somewhat to alfalfa. It is of incomparable excellence and value for hay and pasture, especially for hay. When it blooms it is very valuable for honey; but it is better for hay to cut it just before it blooms, and so is often of no avail at all for the bee-keeper. If, like red clover, it were permitted to bloom fully and freely, before cutting, it would take very high rank as a honey-plant; as it is, there is much bloom, so that in some portions of California it furnishes generous quantities of nectar, and so adds materially to the honey-product of the State. In one respect, it is very valuable. It secretes liberally in seasons of drouth. As the alfalfa is irrigated, it grows and blooms even in drouthy years.

Los Angeles Co., Calif.

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Anti-Bee-Space—A Reply to Criticisms.

BY "COMMON-SENSE BEE-KEEPING."

Mr. Chairman:—I rise to a point of order. I have waited a long time for the subject under discussion to get cool, because some of those who take up their pen to defend the bee-space seem more disposed to hack on the "Common-Sense Bee-Keeper" than they are to discuss the three points at actual issue, which are: That the bee-space is opposed, first, to the successful wintering of bees in cold climates; and, second, the booming of the colonies in the spring; and, third, the early storage of surplus honey in the section-boxes.

C. Theilmann—See page 100.

In the title of my former articles, and in my purpose in writing, I have not desired to irritate the feelings of any one, but I mistrust that the word "detestable" has displeased some readers, and so I will volunteer to change the caption to the one shown above. But it is not necessary for me to say at present whether I am "aunty" or "uncle," for it is not the name that may be tagged to an article that will determine the measure of brains used in writing it, but the sound logic presented on the main points at issue; but racket proves nothing to the point.

On page 562 (1897) Mr. W. C. Gathright, of New Mexico, writes in a gentlemanly style, and no doubt reveals his nature by his article, which men are apt to do, but still he is out of line in more than one particular. In the first place, he is so far south that the warm climate, in some cases, might justify the bees in getting along without a hive altogether, while they might live on the limb of a tree, and be happy all the year round; but wherever the climate is cold enough to depress the normal temperature of the colony to an unsafe degree in wintering, then it must follow, just as certain as eternal laws require effect to follow cause, that the depression of the comfort of the bees in wintering must result in weakening them to a corresponding extent, and in the same proportion that this weakness obtains they will be found weak in the spring, and consequently backward in the storing of surplus honey.

I think Mr. G. is much mistaken in saying that the "bee-space was really the most important part of Mr. Langstroth's invention." If I understand Father Langstroth, his leading idea was to get the combs in movable frames for the purpose of readily opening up the interior of the hive, when necessary, for the purpose of study and other improvements, and when this was obtained the bee-space recommended itself as a convenience, which we have never denied, but it is the evil side of it that we are opposed to.

Mr. Gathright likes the bee-space because "it serves almost the same purpose of a double-walled hive." But the common-sense hive *is* a double-walled hive, for it has a box outside, and the closed ends of the frames inside with a thin air space (not a bee-space) between the closed ends of the frames and the sides of the box. This helps to resist the fluctuations of the outside temperature by keeping out much of the cold in the winter and much of the excessive heat in the summer. He says "that this escape of warm air from the cluster to the adjoining space is the best thing that could happen, since it allows the pure fresh air to take its place." If that is true, then wire screens in the place of the usual top and bottom-boards would be an improvement for admitting "pure fresh air" to the bees all the winter through. If this would work at the Gulf, it would not in the region of snows.

No matter how much mistaken he may think, I admire the spirit of Mr. Gathright's criticism, but on page 594 (1897) Mr. Peter Schartz turns his gun on the "Common-Sense Bee-Keeper," loaded with things witty, wise and otherwise; over which I had a hearty laugh at the first reading, notwithstanding the severe discourtesy of some of his remarks. He does not quote me truthfully by saying that I called the bee-space hives clap-trap inventions. If he will refer to my article he will see that I spoke of clap-trap inventions that might be called improved hives or bee-palaces, and I have seen some clap-trap inventions by those names that were not worthy of any use whatever, in my estimation, beyond the kindling-wood pile.

After his express virulence to my position, Mr. Schartz shows that he does not like the bee-space himself over his bees for wintering, and it seems that he eliminates it by fixing a quilt down on the tops of his frames. Doubtless there are thousands of bee-keepers who do the same thing just because they dread to let that dangerous bee-space hold sway over their bees through the fatal winter. He declares that I am all wrong, and then proceeds at once to show that he puts out the bee-space himself from above his bees, for wintering, by the use of that quilt. Why does he practice the principle which he opposes me for asserting? If the bee-space is no disadvantage in wintering, why does he, and a thousand others, take such pains to crowd it out by fixing down that quilt? See? Now, if he is not astride the fence, I would like to know which side is he on.

That was not a happy remark for Mr. Schartz to make, "If a man isn't man enough to sign his own name his article ought not to be publisht," and using the uncalled for remark about being "called a liar." *Now, Peter,* you ought not to assume an attitude that would make one think of seeing somebody with clencht fists, and grating teeth, and spitting fire, when you have not been toucht nor insulted. And, besides, it is not nice to use such language in writing for ladies and gentleman to read. And, furthermore, in striking at me behind the screen you gave a left-handed swat in the face of the editor of the American Bee Journal, just as if he did not know enough to judge what pieces out to be publisht in his paper. Peter, let us both be calm.

The editor knows my name, and has approved of my propriety in withholding it for a season, and the demand to know it is a strong reason why it should be still withheld for a time. How do you know that I lack so much manhood that I deserve to be accused of it by you in public print, just because I use a "nom-de-plume," which is one of the most common things with authors? Such personalities in writing are like an old gun that kicks against him that uses it worse than it shoots the man at whom it is aimed.

If the editor would permit, I should be glad to see the subject criticised by bee-keepers of long experience in cold climates, using kindness on both sides, for if we dive at each other as if either would swallow the other, the victor might find, after the supposed dinner, that he had more brains in his stomach than he ever had in his head.

Pennsylvania.

Wintering Bees on the Summer Stands Without Packing and Without Loss.

BY JOHN CHRYSOSTOM, C. S. C.

The report of the Northwestern Bee-Keepers' convention, publisht in the columns of the popular Bee Journal, has attracted my attention, especially the questions and answers relating to the best method of wintering bees—a subject to which I have devoted some attention with varied success.

One plan has proven satisfactory in every respect. Since 1894 the hive has not been moved from the summer stand, and has never been packt for wintering. I had only to put on the surplus supers and to remove them when filled.

The hive consists of two 8-frame supers of full depth, each super having a window five by ten inches. I have also another colony wintering on almost the same plan. Now for results:

Since Nov. 10 they have had four cleansing flights, viz.: December 8th and 26th, and Jan. 5th and 8th, on which days they were out from morning till evening. I searcht closely during and after each flight for dead bees, and the total number found in front of both hives was 20, and a few of this number was chilled, hence unable to get back into the hive. One of these is a strong colony of 5-banded bees, on 16 frames in two stories; this colony had 18 funerals, while the other, which is a weak colony of dark Italians on 16 frames in two stories, had only two.

As the wintering of bees seems to be a subject of great interest to the fraternity, I have thought it best to be exact in every particular. If the above should be thought successful, and four years a sufficient length of time to test its merits, I shall write in detail the three essential elements necessary to bring our bees through the long winters without loss, and in a healthy and vigorous condition. When I say *without loss*, I mean that the total number of deaths occuring in a colony of health bees should not exceed 200. I cannot understand why, during winter and spring, the mortality should be greater in a colony of bees than in a flock of sheep or herd of cattle.

St. Joseph Co., Ind., Jan. 22.

[We should be glad to publish the details of the above plan of successful wintering of bees out-doors, if the writer will kindly furnish them. Too much cannot be known about the proper way to winter bees.—Editor.]

A Chicago Bee-Keeper's Report for 1897.

BY EDWARD H. BEARDSLEY.

I see on page 713 (1897) Mr. I. J. Stringham, of New York State, says one of his customers has taken five 28-one-pound section supers from one colony, and asks, "Can Chicago beat that much?" Well, I have waited to see if some one that knows how to write better than I do would not send in a report, but here goes for mine:

I started in the spring of 1897 with 7 colonies—5 in 10-frame dovetailed hives, and 2 in 9-frame Simplicity hives. I have increast to 16 colonies by natural swarming. I have taken, by actual count, 1,485 sections of honey. I have weighed only a few dozen sections, and the heaviest weighed 12¼ pounds to the dozen sections, and the lightest weighed were 22¼ pounds for 23 sections. I have some lighter, but none that are counted in so light but if I were buying I would have to pay for the full section. I have over 60 that were nearly finisht, some not capt at the lower edge, some one side finisht, and the other side not capt. I had nearly 100 all the way from a half round piece 3 inches deep to the section half full. The latter I tried to have the bees clean out; I scratcht the caps with a sharp 4-tined table-fork, and put them on my lightest colony, but they did not do as well as I expected.

My hives are all very heavy, except one which is a late swarm (Aug. 18). It was the largest swarm I ever had. It swarmed out of the best colony I had, and I was working it three supers high.

Some of the hives were so full of bees that they clustered on the outside for several days after I took the supers away. Every colony I had except the late swarm were working in the supers when the honey-flow stopt.

I lost 3 colonies in the fall of 1896. No doubt they became queenless, but I did not know it. I kept the 7 on the summer stands. I placed a rim two inches deep between the hive-body and the bottom-board, then put on an empty super and some sticks across the frames like a Hill's device, and covered with two thicknesses of coarse sacking, then put in a bag of ground cork to fill the super full. I made boxes (from old meat-packing boxes that cost 5 cents each) to set over them, with a space of three inches around them, except front 1⅛ inch, and filled with planer shavings. I kept them packt until dandelion bloom was quite plenty. Then part of the hives had the space below the frames filled with drone-comb and brood, and the young drones were just hatching out.

The season was later than the year before. That year I saw sweet clover May 28, and bees workt strong on it June 6. In 1897 I did not see a blossom on it till June 28, nor a bee till July 6, and from that time till Sept. 30 it was lively; then the dry weather spoiled it.

I have hived my swarms on full sheets of foundation, set the new swarm where the old one stood, and turned the old one partly around, and the seventh day carried the old one to some other stand. In 1896 I moved the super from the old colony to the new one; last year I did not, but the third day I put a super with some partly-filled sections on it, and they seemed to go right to work in them, but "they got there all the same" in the brood-chamber, too.

Well, I have learned some things that I did not know before, and some things I thought I did know I had to learn differently. Those books are a good thing to have on hand, but a person wants some bees also, and they help a fellow out wonderfully.

In 1896, when the first super was ½ or ¾ full, I would raise it up and put another under it, and the bees would nearly finish the first before working much in second. In 1897, if the first was ½ full in the middle of it they would cap it and work down through the second supers about the same width, and fill the spaces between solid full, then swarm out. I could give no reason for it unless it was because the nights were very cool at that time.

I tried one colony with three supers; they left the top one less than half full, the second nearly finisht, the lower stuft full, also the bee-space, then they swarmed out, and I waiting for them to fill the top one. It was the largest swarm I ever saw. I filled an 8-frame dovetailed hive, then run a lot back where they came from, and put on more empty supers, and everything was all right.

I tried one super without separators, and won't do it again. The middle row of sections was 2½ inches thick; those next to it were one-sided and bulged into the next all through the super.

My bees are the common, and some hybrid, with one and two yellow rings. (Perhaps the Italians would have done better.) They show their bringing up. They are nice and kind to work with.

The first 900 or 1,000 sections were the nicest honey, as clear and white as water. After the golden-rod bloomed it was tinged with yellow, but that is more in the wax than in the honey. None of it is as dark as some here in a store labeled "White Clover Honey—2 for 25 cents."

I have sold over 1,000 sections, and got 15 cents each, except for four dozen I put into one of the groceries, and they allow me 14 cents for that.

My bee-yard has not a shrub or thing in it, and I keep it mowed close. There are some small trees 150 feet away. Just before swarming-time I cut some willow branches and set them in clusters in the yard and kept them well watered, and they kept green quite awhile. To make them attractive to the bees I got some ladies' black hose and tied them in bunches on the willow twigs. When the bees swarmed they would fly but a short time then settle on or close to a bunch of the hose. Only two of the swarms went out of the yard (which is 40 feet square). One of the two went about 100 feet, and before I could hive them they got homesick and went back to see mamma.

My winter boxes are made sides and ends separate, and when put up are held together with one hook and staples. The sides make splendid shade-boards in hot weather, and it takes but little space to pile them up when not in use.

Can't some of the bee-keepers around Chicago tell a little better story than this? It *does* make me feel a little cheap when I read in the papers of some one getting 500 pounds of extracted honey, and I writing about my bees when they did not average 200 pounds, wax and all. Cook Co., Ill.

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Cogitations of an Old-New "Bee-Crank."

BY WM. M. WHITNEY.

Altho in my 70th year, I am only a three-year-old bee-keeper. Among my many regrets, because of the things I have not done, which should have been done, is, that I did not begin bee-keeping in my youth. No subject for study have I found more fascinating than the honey-bee; indeed, as young as I am in the business, my friends point to me as "*an old bee-crank.*"

Not that there is so much money in the business, that it interests me, for I doubt (taking a series of years together) whether the average bee-keeper makes any money from his bees; but, O my, what a field for investigation and thought! there is no end to surprises for those who intelligently investigate in this, as in all other departments of nature.

In talking with an old Ohio bee-keeper not long ago, I said to him: "You must have the bee-business down pretty fine by this time." He replied that he had been in the business since boyhood, liked it, had tried to learn what he could, had run his apiary for comb and extracted honey, increast by natural swarming and by artificial means, reared queens, adopted the most approved methods in the general management of his bees; but, when he felt like congratulating himself that the whole field had been explored, some surprise was sprung upon him, causing the reflection that he knew but little about the business. Tho having read "A B C of Bee-Culture," Langstroth's original work, also the revision by Dadant, and other writings on the same subject, as well as bee-papers, even in my own limited experience, there have been surprises not mentioned in the books.

It is with the greatest pleasure that the American Bee Journal is greeted on its arrival each week. I am highly entertained by Drs. Gallup and Miller, Prof. Cook, Messrs. Hutchinson, Dadant, Doolittle and others. I never met either of them, excepting as I see them in the "Old Reliable." I am sorry for that. I think I would know any one of them at sight. May not be a good judge of faces, but as they appear in the American Bee Journal, it doesn't occur to me, that any one of them, in stating a matter of fact—such as, for instance, whether he had ever seen two laying queens on being introduced make faces at each other and call each other names, or not—would with premeditation deliberately (to use no stronger term) prevaricate. No, sir; I don't believe it, do you? You need not commit yourself; I will not press the question.

Fellow bee-keepers, while we may fortify our position with all the facts and logic at our command, let us be courteous and gentlemanly withal.

We are told that, "In the multitude of counsellors there is safety." Now, I don't know about that. I dislike to fly in the face of Solomon, but sometimes I wish we could know that the above proverb is true.

The novice in bee-keeping is confronted with so many conflicting theories, on the management of bees, that he becomes confused, and is left to his own experience for positive knowledge, which at times becomes an expensive teacher.

The conflicts among our teachers, respecting the manipulation of the apiary to obtain specific results, sometimes reminds me of the quarrel by the two knights about the color of the shield—each observing and reasoning from his peculiar standpoint.

Mr. A., located in Florida, Texas, or California, where the climate is mild; hence, the season long, conducts his operations quite unlike those of Mr. B., in Wisconsin, or any other bee-keeper in any of the northern or eastern States. Differences in construction of hives, in seasons, honey-flow, and various other things, materially affect the conditions, and should modify the management of the apiary. The same conditions seldom obtain two seasons in succession in the same locality; hence the necessity for the bee-keeper to keep his eyes open and clear. A drowsy head for a week or ten days, often means a total loss of profits, as well as endangering the existence of the apiary. No "sleepy head" has any business to keep bees.

It pleases me to hear Dr. Gallup and Dr. Miller say, "I write from the standpoint of my own locality; as much as to say, "If there is anything you can appropriate in what I have said, all right, use it; or, modify it to suit your locality and surroundings."

But, what do *you* know about bee-keeping, did you say? Well, I'll be candid. What I don't know would make a big book; but I've a few good teachers—my pets—and I'm learning a few things, some of which are not in the books.

I may see you later, unless, like Mr. Bevins, I take a Rip Van Winkle sleep. Geauga Co., Ohio.

BIOGRAPHICAL

MR. C. THEILMANN.

The subject of this sketch was born June 6, 1833, in Kieselbronn, near Pforzheim, in Baden, Germany. His ancestors escaped the massacre of what is called "The Cruel Bartoloma Night in France," and found safety across the river Rhine, in Baden.

Mr. Theilmann attended common school from his 6th to his 14th year, besides one winter term in his 20th year, in a drawing school at Pforzheim; otherwise he staid at home and helpt his father to work his land until he came to America. He landed in New York in April, 1854, after a voyage of 42 days. He rambled for two years, going to Albany and Buffalo, N. Y.; Cleveland, Columbus, and Cincinnati, Ohio; Louisville, Ky.; Memphis, Tenn.; and to New Orleans, La., where he workt on a sugar plantation, got sick, and nearly died with yellow fever; when recovered he went to Shreveport, La., Pittsburg, Pa., then to St. Louis, Kansas City and Council Bluffs, and back to St. Louis, Mo. In June, 1856, he started for Minnesota, and took up a Government claim in Wabasha county, on which he still lives. During all his rambles he earned enough to make his living and pay his way, as he had given nearly all the money he brought with him from Germany to a distrest friend, when he landed at New York.

In the fall of 1856 he was married in St. Louis, and took his wife to his new home in the wilderness, among the Sioux Indians, wolves and rattlesnakes, tho they have never done any harm to them. A cat, that came to them, was the first domestic animal they possest for many months. Speckled trout in the creek were plentiful, as the Indians would not eat them.

The first year Mr. T. had to carry his provisions on his back from Wabasha (13 miles), making the round trip in a day, sometimes without his dinner.

In 1857 he hired four yoke of oxen and a 24-inch breaking plow of some of his nearest neighbors three miles away, and broke up the first six acres on his claim in two days, *all alone*; and paid for the outfit with 17 days of 14 hours each, or 50 cents a day, mowing grass for hay by hand. The boys and young men of to-day would say, "I wouldn't do that;" but many of them would get along far better if they would.

Mr. Theilmann kept on working and improving his claim, and after awhile bought a cow and a yoke of oxen. Boys and girls were born until there were five in the family. They grew up rapidly, and soon helpt their father and mother. The country settled up rapidly, a school district was formed, and school was held in a primitive log house first.

In 1860 the Indians disappeared, just a little while before the New Ulm massacre, and never came back. In 1863, Mr. T. raised over 1,100 bushels of wheat on 25 acres of land, of which 200 bushels where sold out of his granary for $500; he has also had wheat in succession for 17 years on a 16-acre piece, and never had less than 25 bushels per acre, and up to 45 bushels without the least fertilizing.

In 1869 Mr. T. found a bee-tree in his woods, and took it home; from this and two more swarms he found, he started his bee-keeping, transferred them to frame hives, Italianized and increast them to 74 colonies. In 1871 he lost all but four colonies, but by May, 1872, he hunted and found 15 colonies in trees and rocks in his vicinity; this gave him a start again. For nine years after this he tried all kinds of wintering methods without satisfaction, until in 1882 he built a bee-cellar all under-ground, which stood the test, and since then his losses have been very light in wintering, and they have averaged him an income of about $1,000 a year.

On Jan. 25, 1885, one of his bee-repositories, in which 87 colonies were wintering, burned down, but fortunately he had 100 colonies in two other bee-cellars. He started the season of 1885 with 90 colonies, which he increast to 170, and produced 6,500 pounds of very fine honey, which sold for from 15 to 20 cents per pound.

The season of 1889 was the best with him, 185 colonies, spring count, producing 25,000 pounds of comb honey. His honey crop and bees sold that year amounted to about $2,500. The best from one colony and its increase he ever got in one season was five good swarms and 600 pounds of honey; this was in 1872.

A carload of the honey crop of 1896 was sent to a Chicago commission man, who has tried to swindle him out of it for the past 18 months; it is still in court.

The season of 1897 was almost a total failure, getting 1,700 pounds of honey from over 200 colonies.

In 1877 a railroad was built from Wabasha to Zumbrota, with a station on Mr. Theilmann's land. Mr. T. saw the opportunity, and laid out a village, calling it Theilmanton; it is now a village of about 100 inhabitants, with nearly all conveniences farmers generally need, and is quite a big shipping point for grain and stock. Mr. T. also built a warehouse and grain-elevator, which is the handiest and most substantial building on that line of the road. It works wholly automatically, without machinery of any kind, from the farmer's load to the cars. The grain can be weighed going in, also going out, without shoveling or other hand work except moving a light lever. Mr. Theilmann planned it himself and prepared the drawings for it. The warehouse and the station agency were run by him for five years, when he sold it and went West on a trip to California and Oregon, and got interested in medical lakes and healing mineral waters in Washington, 16 miles west of Spokane Falls; also in general mercantile at the Lake. He was the first bee-keeper that took two colonies of bees from Walla Walla across the Snake river as far north as Medical Lake. The bees were left in care of his oldest son, George; they did fairly well for five years, or until Mr. T. sold out there.

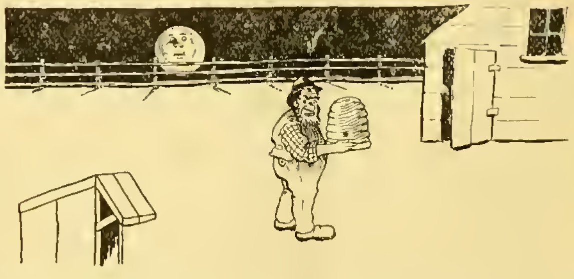
In the meantime the farm and bee-culture were carried on at the old homestead, and Mr. Theilmann is satisfied and contented that he cannot find a better place in the Union for his taste than what he has, especially after seeing Texas and some other Southern States three years ago.

Mr. Theilmann's farm now consists of over 700 acres of land, some of it rather rough, but good pasture for his bees, cattle, swine and fine-bred French Percheron horses; with substantial buildings for all of them, also a good house for himself, wife, and two children, a boy and a girl. Two sons and one daughter are married and have homes of their own.

Mr. Theilmann learned enough in the drawing school to make his own plans and drawings for the many structures he has built on his own land, and otherwise, to almost perfection in handiness, work-saving, durability and comfort. He has also caused a nice little church to be built at Theilmanton, in which to worship and give thanks to the Giver of all good things for what we receive from his Fatherly hand.

A FRIEND.

Bees and Poultry in Winter—An Experiment.



No. 1—FARMER GREENY—"I believe I'll just put these bees in with the chickens over night. I don't think they'll disturb each other."

[See No. 2 on page 103.]

☞ See "Bee-Keeper's Guide" offer on page 110.

CONVENTION PROCEEDINGS

Report of the Northwestern Bee-Keepers' Convention, Held in Chicago, Nov. 10 and 11, 1897.

REPORTED BY A SPECIAL BEE JOURNAL REPORTER.

(Continued from page 85.)

FIRST DAY—Evening Session.

FEEDING BEES WHEN GATHING POLLEN, OR FOR STIMULATIVE PURPOSES.

"Is it profitable to feed bees as soon as they carry in pollen?

Pres. Miller—How many have had experience in feeding bees as soon as they carry in pollen in the spring? [Three had.]

Mr. Green—I never tried it but once: that year it was very successful, but was much trouble. I might say I fed at that time by placing a case of candy under the hive, and there was flour mixt with candy; I never knew the bees to build up so well, but it was troublesome and expensive.

Dr. Besse—I have to feed as early as the bees fly readily, whether they gather much pollen or not. I put my feeders out in the yard, if it is warm weather enough so they can have a little taste every day. It stimulates the queen to go to laying sooner. I have practiced it for the last three or four years.

Mr. Baxter—I don't practice it any more; I used to do it; as soon as the weather began to warm up in the spring I would feed them a little before they began to gather pollen, so as to induce them to breed; and as they began to extend their brood, and the weather was warm, I would move the frame of brood over and put a frame of honey in between, that had no brood in it, so as to force them to extend as fast as they could take care of them; the result was very favorable; produced very big crops that way. In 1889 I had 41 colonies fed in that way that produced 23 barrels of honey, an average of over 275 pounds to a colony; one colony produced 600 pounds. My mother practiced it up to within three years ago; since that I have taken care of the bees, but she used to get a great deal more honey to the number of colonies than I did when I didn't do that. It is good, and it will pay.

Mr. Whitcomb—That would depend entirely upon conditions, it seems to me. In Nebraska there is no honey-flow until Aug. 15, and then we get a couple hundred pounds after that. I would not want to commence in the spring and stimulate a colony. I watch the honey-flow, and about 30 days ahead of that I do the stimulating; the less bees you have in the hive the better you are off until this flow comes in. Conditions have a great deal to do with it when you have to feed.

Mr. Baxter—I agree there. I presume the question meant where there was a white clover flow, of course. We are so accustomed to have it all through the Mississippi valley; we base our assertions on that, I suppose.

Pres. Miller—The plan in Germany is very popular; they call it "speculative feeding" there.

Mr. Baldridge—I would like to ask these persons how they feed.

Mr. Baxter—In the hive, always. My first feeder is simply an oyster-can. Take a piece of flour-sack, put it over the can, tie a string all around it, and put a little piece of wood in to keep it as tight as possible. However, of late years I have been using the Hill feeder, the end full of little holes.

Mr. Green—The only feeding I ever did early in the season was by candying; but later in the season I have practiced stimulative feeding considerable. I much prefer it to feeding out-of-doors, unless there are too many bees in the neighborhood. That is the most economical, and less laborious, and stimulates all the bees much more than feeding in the hives.

A Member—I have had a little experience in feeding bees, following the advice given me, of putting the feed outside for just an hour before sundown; then the bees would not rob, and only your own bees (if you have other bees in the neighborhood) would get the honey. I fed them that way in the spring and late in the fall the past season. I tried to induce them again to rear some young bees, but I have several neighbors that have bees in my neighborhood, and I thought I would see whether their bees noticed my feeding; when I came over they were more lively than mine were, so I have changed now, and am using an entrance-feeder. I have a Mason fruit-jar placed in front of the hive, so that only bees from the inside of the hive can get through, and none from the outside. I like this better because I can put the feed into the Mason fruit-jar, and do easier work than feeding outside.

Mr. Wheeler—I don't believe out-door feeding is good economy at all. Let your strong ones alone until such times as they need it, and feed the weak ones.

A Member—I differ from Mr. Wheeler. I believe in not feeding the weak colonies at all.

Mr. Rohrs—I believe in building up the weak colonies by feeding the strong ones.

Dr. Besse—I expect to make my money from spring colonies. As early in the spring as I can I equalize them; then I use stimulating feeding, and I saw the benefit of it this year. I produced more comb honey from my colonies than ever before.

Mr. Rohrs—As I understand this, it is stimulating feeding, not feeding to keep alive, and therefore my practice is to feed spring colonies; those are the ones that want stimulating; the weak colonies have all they can take care of; you want to stimulate the strong ones, and when the weak colonies get strong, they can take care of more brood, then it is time to begin feeding them. You must be careful; it requires judgment if it is done properly.

Mr. Baldridge—I don't feed any, and don't believe in it now; I have plenty of honey in my hives, and find the colonies get strong enough to swarm about May 20, without any feeding; if I had 20 colonies, and 10 were somewhat weak and 10 very strong, I would simply exchange places at the proper time. I should prefer to do it in the middle of the day, when they are at work.

Mr. Baxter—That will equalize them, but not stimulate them. I have never found a colony yet that was too strong for me.

Mr. Baldridge—I don't claim the colonies can get too strong. I claim that the best way is to equalize them, and make them all strong. There should not be any weak ones when the honey harvest begins, and there will not be if you follow that plan.

Mr. Baxter—I am afraid to practice that again. I have lost queens in just that way.

Pres. Miller—The question is about feeding in the spring to stimulate.

Mr. Baldridge—I wish to say I have practiced this 10 years in large apiaries.

Mr. Wheeler—I have lost many queens that way. If you change hives in the spring you will have trouble; it comes the time just before the white clover flow, and if a queen is lost then swarming begins, and they are thrown clear out. It is all right to experiment with a few, but I would not go at it by the wholesale.

Pres. Miller—Perhaps we must take this into consideration, that what is safe under certain circumstances may not be safe under others. Mr. Baldridge kept bees and workt at it before most of us knew anything about it—certainly before I did—and what might be perfectly safe with him might not be safe with others, because he would be on his guard as to the dangers of the situation.

NUMBER OF COLONIES AND SIZE OF CROP.

"How many colonies has each member, and what has been his crop this year (1897)?"

Mr. Thompson—Spring count 15 colonies, increast to 17, and harvested 400 pounds of comb honey and 800 of extracted.

Mr. Kennan—Spring count, 4, increast to 7, and secured 450 pounds of comb honey.

Mr. Rohrs—Spring count, 24, now 48; and got about 2,300 pounds of extracted honey.

Mr. Kreutzinger—102, spring count, 143 at present; 5,000 pounds of comb honey, and a small quantity of extracted.

Mr. Green—I had about 90 colonies in the spring, and about 140 now. I took about 12,000 pounds of honey, half comb and half extracted.

Mr. York—I had four colonies in the spring; increast to 8, and had 400 pounds of sweet clover comb honey. My apiary is right in the city.

Mr. Wheeler—Spring count 370, and at present 458. I took 6,000 pounds of comb honey and 18,000 of extracted. I have six apiaries.

Mr. Baldridge—16 colonies in the spring, and 30 now. I don't know how much honey, but I know of about 400 pounds of comb and 2,000 of extracted. I don't know how much more there is.

Dr. Besse—60 colonies in the spring, increast to 122, and I took off a little over 3,000 pounds of comb honey, and about that much extracted.

Mr. Baxter—About 250 colonies in the spring, and took about 40 barrels of honey for my share, the barrels averaging about 575 pounds net, making in the neighborhood of 22,000 pounds of extracted honey; and about 500 pounds of comb honey. I had four yards, and gave one-fifth of the three yards for the privilege of keeping the bees; that would be about five barrels for their share. Then I have 15 colonies of my mother's in the same yard, which I take care of for her and give her all the honey, and she got two barrels.

Mr. Norris—10 colonies in the spring, 14 now, and about 500 pounds of comb honey.

Mr. Whitcomb—Started in the spring with 12, increast to 30, and have 1,500 pounds of extracted honey, besides 500 of comb.

Mr. Finch—Started with 15 colonies in the spring, increast to 45, and have now about 600 pounds of honey, half extracted and half comb.

Mr. Kartch—I had 10 colonies, spring count. I got them a little late, so I was a little slow in getting to work. I increast them to 20, and I have taken off about 300 pounds of honey.

Mr. Schaper—About 50 colonies in the spring, now about 85, and I took 2,000 pounds of honey, 500 of it being comb.

Mr. Nau—About 12 or 14 in spring, 18 or 20 now, and took about 500 pounds of comb honey.

Pres. Miller—239 colonies, spring count, 295 now, and I took a little over 17,000 pounds of comb honey, with perhaps 300 of extracted.

[Continued next week.]

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Hive-Ventilation in Winter.

My bees are in original Langstroth hives, with wooden honey-board and tight bottoms. I have opened all holes in the honey-board, and packt with chaff cushions on top, making them air-tight on top. How much ventilation should they have at the entrance?

VIRGINIA.

ANSWER.—The tendency nowadays is toward a good deal. The stronger the colony the more they need. Perhaps the whole width of the hive by one-half inch is none too much, keeping watch that the entrance isn't clogged.

Bees in a New Bee-Cellar.

I built a bee-house or bee-cellar by digging in the ground 3½ feet, and then built a wall 4½ feet high. The cellar is 10x14 feet. I set two rows of posts through the center and made a roof of green oak poles, then put on straw and then dirt, then straw and then dirt, with a 6-inch hole for ventilation. The doors are so arranged as to be double. The mercury stood about 45° the first part of the winter. The green timber began to mold, and the mercury went down to 40°. I then closed the ventilator, but was afraid to leave it closed on account of the mold. I see some mold in the front of some of the hives.

I put 6-inch scantling on the ground edgewise to keep the bees off the ground. I left the hive tops and bottoms on. This wall was green, laid up late in the fall, so it did not get a chance to dry out, and the poles were green. I had a stove in there for two or three weeks. I had it pretty well dried out. The mercury stands at 38° now. Do you think the bees are all right? If not, what can I do to help them? I have 40 colonies in the cellar. I had a heavy loss last year in wintering.

IOWA.

ANSWER.—Very likely you are doing about as well as you can. The best thing will be to repeat the fire if it goes below 45° much, unless indeed there should be something objectionable about the way the fire is managed. Of course it will not do to have a fire without a pipe to carry the smoke clear out of the cellar, not even as some think allowable, if an oil or gasoline stove is used, 38° is too low, and it will probably do no harm to start a fire whenever it gets down to 40°. Still, 40° is not so very bad if not continued too long, and it is just possible you may find it all right, for there is a great variation in thermometers. The best test is to see whether the bees are very quiet. That temperature is the best for them at which they make the least noise.

Don't Disturb the Bees—Section-Cleaner.

Last fall my bees had plenty of stores for winter. I packt them with one foot of straw and planer chips on top, bottom and sides. There are 34 colonies in one row, with 3-inch space between each colony. I am afraid they are too warm, and have used up their stores rearing brood. I send you a sample of bees which I think is this year's rearing. If so, will I have to feed them before warm weather? The bees I send you flew out and died on the snow.

Tell Mr. Golden to put a cushion of felt between the wheel and the sand-paper on his section-cleaner, and it will work nicer. It will make the section ride smooth. He can glue each succeeding piece of sand-paper on without taking the old one off.

Did you ever try drying out your bee-cellar with the heat of a good stove, and then let it cool down to the right temperature just previous to putting the bees in?

WISCONSIN.

ANSWER.—I think the bees you send were reared last summer or fall, and I don't believe you need worry. Probably the best thing you can do is to let your bees severely alone till weather comes warm enough for them to fly nearly every day. It is barely possible some of them may not have stores enough to last till that time, but I'd take the chance rather than do the mischief of disturbing them.

How Often to Open Hives—Winter Packing.

1. How often should the body of the hive be opened to see that all is going right when we have both time and inclination to give our bees first-class care, commencing with February and ending with the packing for winter?

Out of 10 swarms I had three that became queenless in the spring or early summer. I soon knew of it, and remedied the evil. A friend told me that I fust with my bees too much, and suggested that I killed the three queens in handling the frames, but I always tried to be very careful.

2. I would like to have your judgment on the way I packt my bees for winter. If it is advisable, it is a way farmers can easily do:

I use the 8-frame Langstroth dovetail hive. I work mostly for extracted honey. The super is the same size as the body. In the fall I lookt through the hives, and if any contained less than 25 pounds of honey, I fed up to that amount, then as there is a bee-space between the tops of the brood-frames and the queen-excluders, I left the excluders on several of the hives, and took out the excluders and put Hill devices on several others for experiment. Then, as I left shallow frames on one hive last winter, and that colony commenced work in the spring earlier than those with the Hill devices on, I left two with shallow frames on this winter. Then I put a large empty super on each hive, including the two that I had already put on shallow supers of frames. I took a gunny-sack for each super, and put enough dry leaves into it so that when it was prest down in the deep super it would fill it about half full. Then I put on the covers.

My hives are on the summer stands, fronting south, all in a straight row. For outside protection I laid corn-fodder down straight on the ground behind them, piling it up about to the tops of the supers; then I took a six-inch fence-board and nailed sharpened stakes near each end, and drove the stakes into the ground, so that the board came against the front ends of the hive-bodies, covering a large portion of the upper part of them. I then filled the spaces between the hives with old hay. With the corn-fodder behind and the board in front, I could pack the hay in very nicely, and filled it in nearly to the tops of the supers. For ventilation I left the entrance entirely open, full width of the hive.

I wish to know which of the ways I packt the cushions over the tops of the bees is the best; or is there some way better than either of them?

I wish also to know what you think of my method of out side packing. Does it pay? or would the bees do well enough without any? My latitude is a little less than 40°. Chaff hives are highly recommended, but they are not advisable for me.

The American Bee Journal is a great help to me. I would not think of continuing the business without it.

KANSAS.

ANSWERS.—1. It isn't easy to say how often it is best to open hives. Some, who may perhaps be considered extremists in that direction, say they don't need to open a hive more than once in three years. Others may open a hive once in a week or ten days, but certainly not commencing in February. If the bees have been properly supplied with stores the preceding fall, there can hardly be any excuse for opening them before May, and a colony should not be disturbed unless there is some good reason for it. All depends on the kind of management, and yet both ways may be good. It is very probable that those who open their hives once a week lose more queens by it than they suppose (hardly as many as you lost, tho), and yet the advantage gained by opening may pay for all the losses of queens. Few, however, would think of opening a hive as often as once a week, and it's a good rule to open a hive no oftener than is necessary.

2. Your packing over the bees ought to be good, and most likely they will be better off for the outside packing. If I understand you correctly, there is nothing to hinder the rain from soaking your outside packing, and it is important that it should be kept dry. There is also danger that your bees may not have enough stores, especially if winter should hold late into spring. It's better always to be on the safe side, and too much is always just about enough in the case of winter stores for bees.

I don't know which of the three ways of your inside packing is best, but believe I'd just as soon not have the empty frames over. The closer down to the frames the cushion is the better, providing there is chance enough for the bees to cross from one frame to the other.

In all this matter of out-door wintering much depends upon surroundings that are not taken into account. Buildings, trees or hills surrounding an apiary may make a success where the same preparation would be a failure in an open location with the winds having full sweep.

Wintering—Increase—Supers and Separators.

1. I have 13 colonies of Italians in 12-frame "New Model" hives. I put them in a good cellar with the temperature ranging from 38° to 45°, Nov. 25, with plenty of stores. I raised the hives in front ½ inch from the bottom-board, the cap being glued down tight. Are they all right?

2. I desire to increase 25 colonies—would it be best to divide in the spring, or let them swarm?

3. As I am obliged to make new supers, would you advise me to make them for the 3½x5⅜ sections, or the 4¼x4¼ sections?

4. What kind of separators are best and cheapest?

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ANSWERS.—1. If your thermometer is reliable it might be better to have the temperature higher. It is not well to have the temperature down as low as 38°, especially for any extended period. But note at what temperature the bees are most quiet, and try to keep them near that point. If the entrance is only ½ inch, that is not nearly so well as an inch, and two inches may be still better.

2. In any case don't divide till regular time of swarming, then perhaps you will do well to allow what will to swarm once, and divide any that are too lazy about swarming.

3. I don't know. The new size is as yet on trial, and you might do well to try both.

4. The probability is that you mean the material of which the separator is made. If separators are nailed on, tin is perhaps the best of all, and cheapest in the long run. If separators are to be used loose, then wood.

Using Unfinisht Sections—Two-Pound Sections.

1. I notice you produce nearly all section honey, and I want to produce the same. Last fall I took about 400 sections off, and the comb is all right, but no honey in them. If I put them on next spring, will the bees work on them? I have them put away in boxes, and are all right as far as I can see.

2. Do you use the 2-pound section? If you do, and think they are any better, I will get them. I don't want to produce any extracted honey. I would rather part with the bees than have the people think I am selling something not honey.

I see a good deal is said about the bee-moth. I have a neighbor who keeps a grocery store, and he had some molasses that was spoilt; he put it into a jug and said I might take it to the bees. I did not like to say I would not, when he had been so good to keep it. I took it and put it away where the bees could not get at it, and it soured. I happened to set it out one night, and in the morning it was covered with bee-moth. I let it stand, and the bees never bothered it, but I had to take the bee-moth off. It lookt as if it would be a good trap for them.

SUBSCRIBER.

ANSWERS.—1. The bees will work on them all right enough, probably preferring them to fresh sections. Whether they will be as good for you depends on whether all honey was thoroughly cleaned out of them by the bees last fall. If any was left in, no matter how little, it will be granulated, and that will affect the honey the bees store in them.

2. Two-pound sections have given way almost entirely to the one-pounds, and in the general market will not bring as much per pound. It is hardly advisable for you to try them.

Bees Buried Under Snowdrifts.

I am wintering 35 colonies in winter-cases on the summer stands, and they are not protected so but what the snow drifts over them so that some are completely buried.

1. Would it be best to leave them thus, or shovel away from the entrances? I shoveled the snow away once in January, and it came off a bright day so that the bees (being disturbed) came out in quite large numbers and fell blinded to the snow, where they perish.

2. Would it do any harm to lightly scatter some straw over the entrances?

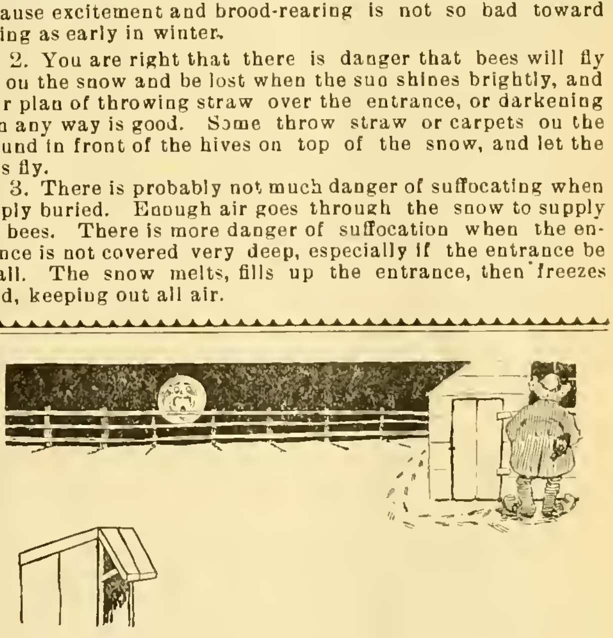
3. Will they be in any danger of smothering where the hive is covered with snow?

MICHIGAN.

ANSWERS.—1. Wintering under snow is a somewhat mixt business. Some say they want nothing better, and probably as a rule it's good. But it may also be very bad. If I remember correctly, Doolittle says he had some colonies completely buried that were ruined thereby. The snow kept them so warm that they started breeding largely, and finisht their existence with a severe case of diarrhea. The later in the winter it should happen that a colony was completely buried, the later the danger therefrom, not only because there would be likelihood that they would be the sooner thawed out, but because excitement and brood-rearing is not so bad toward spring as early in winter.

2. You are right that there is danger that bees will fly out on the snow and be lost when the sun shines brightly, and your plan of throwing straw over the entrance, or darkening it in any way is good. Some throw straw or carpets on the ground in front of the hives on top of the snow, and let the bees fly.

3. There is probably not much danger of suffocating when deeply buried. Enough air goes through the snow to supply the bees. There is more danger of suffocation when the entrance is not covered very deep, especially if the entrance be small. The snow melts, fills up the entrance, then freezes solid, keeping out all air.



No. 2—DEACON JOHNSING—"I woudah how many feddahs dey am on dis heah roost."

[See No. 3 on page 106.

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EUGENE SECOR, Forest City, Iowa.

VOL. XXXVIII. CHICAGO, ILL., FEB. 17, 1898. NO. 7.

EDITORIAL COMMENTS

A Sad Year for bee-keepers seems to be the general report from all over Europe with regard to the year 1897, some saying it will be long remembered as the worst year of the century.

◆

Cheap Hives.—"Hives that may be bought for $25 a hundred in the flat, are good enough for any bees......when painted two coats of good paint," says George Appleton in the Wisconsin Agriculturist. Yes, and kegs costing less than 5 cents may be good enough for bees, but the question is whether it is good enough for an intelligent bee-keeper. Will Mr. Appleton tell us where he can get hives at anything like $25 a hundred with which he would be satisfied?

◆

The Langstroth Monument Fund.—Mr. N. Cameron, of Douglas Co., Kans., sends us the following on this important subject:

> EDITOR BEE JOURNAL:—I see there has been an effort made to raise a monument fund for the late Rev. L. L. Langstroth. I do not know just what has been done, as I have not been taking the bee-papers for some time, but it is my opinion, if a proper effort was made, we could raise a respectable fund. We ought to be ashamed of ourselves if we do not make that fund at least $500 or $1,000. I was always an admirer of Langstroth, so much that I named one of my boys Huber Langstroth.
>
> Now, I have this suggestion to make: I will be one of 500 that will give one dollar each, or I will be one of 100 that will give five dollars each. I believe that every bee-keeper who uses the movable frame is indebted to Langstroth more than one dollar, and many of us more than a hundred times that.
>
> I was going to suggest that subscription blanks be sent to every bee-keeper in the United States that can be reacht—several to each one—with a request to get as many subscriptions as possible, no money to be called for till at least $500 is subscribed. I would be sorry to believe that the bee-keepers of America are so poor, or so penurious, that they will not do something respectable, to the memory of one who did so much for them. Yours truly, N. CAMERON.

Well, what do you think of Mr. Cameron's suggestions, reader? It is for you to say, if you have not already contributed to the fund.

Since our last report we have received $1.00 from Wm. Stolley, of Nebraska; 50 cents from A. Snideman, of Colorado; and 25 cents from A. L. Barner, of Washington. We are ready to receive more, and then to turn it over to the proper authorities.

◆

A Troublesome Conundrum is propounded in the Pacific Bee Journal by W. A. H. Gilstrap, who inquires: "If the production of honey is as profitable as some claim it to be, why do nearly all who own bees remain in moderate circumstances?" But there's the fun, Mr. Gilstrap. Besides, can you name a business in which fewer men have gone into bankruptcy?

◆

Bean-Honey.—One accustomed to seeing only a few beans raised in a garden is hardly inclined to think that bean honey can amount to such a great deal. But C. A. Hatch, in Gleanings, explains that in California whole farms, and large farms at that, are devoted to raising Lima beans. He says:

> "One ranch near Ventura has 1,900 acres, mostly in beans. The crop of this ranch was 19 carloads one year. I saw 10 two-horse teams cutting, and 25 men shocking beans on their ranch this year, at one time."

No wonder bean-honey amounts to something! It is white and of fine quality, but not positive in flavor, like clover or linden. It never gets as thick as sage honey, and is prone to candy quickly.

◆

Wisconsin Favors Amalgamation.—We have received the following from Pres. N. E. France, of the Wisconsin bee-association, which shows the trend of opinions in that State on the amalgamation of the two Unions:

> These resolutions were adopted at the meeting held in Madison, Feb. 3:
>
> *Resolved*, That the Wisconsin State Bee-Keepers' Association do hereby endorse the United States Bee-Keepers' Union, and recommend Wisconsin bee-keepers to send $1.00 each to its General Manager, Hon. Eugene Secor, Forest City, Iowa, for membership. Also,
>
> *Resolved*, That we will rejoice over the amalgamation of the two Unions under one management.

Mr. France, with the foregoing, sent the membership fee of $1.00 for the firm of E. France & Son, and added:

> "We have been members of the old Union ever since its birth, but believe the time has come for the two Unions to unite."

◆

No Klondike in Bee-Papers.—A goodly number of bee-papers have been started at one time and another which proclaimed that they were getting on swimmingly—"had come to stay"—subscriptions were coming in rapidly, etc.; but in a little while they were gone where the woodbine twineth, leaving some chance for doubts as to their proclaimed prosperity. After so many of that sort it is somewhat refreshing to find one which frankly comes out and says it isn't a howling success. "The Bee-Master," of Sheffield, England, has reacht its 5th number, and says: "At present we are losing $50 per month, without charging anything for our own work of booking, addressing wrappers, etc.;" that there are 200 subscribers, and it would require 1,000 to pay expenses out of pocket.

But we needn't go to England for that sort of honesty. It can be found in the columns of the Progressive Bee-Keeper, which has entered its eighth year, and whose publisher says: "Friends, do you know the Progressive has never made a dollar for me yet? It is a fact. It has never paid more than expenses." And yet the Progressive is worth a dozen of those papers that flourisht such long lists of subscribers, and then mysteriously faded out of existence. It has workt hard for success, but it seems clear that a bee-paper is not generally a Klondike.

◆

A Honey Syndicate is proposed in Belgium to meet the crisis that is upon them by which the price of extracted honey has fallen till it will not bring in some cases more than 11 to 15 cents a pound. A. Gustin has formulated a constitution and by-laws for such an organization, which occupies nearly five pages of the Belgium bee-journal, Le Rucher Belge. According to the proposed plan each member agrees to deliver all his honey to the syndicate except enough for his own household, to furnish only pure honey, and not to get honey of a third party to furnish to the syndicate. The matter is being warmly discust, pro and con, but all in the best spirit.

◆

Progress in Bee-Culture.—A. I. Root tells about it in New York Tribune. It makes one green with envy to hear him tell about getting 25 cents a pound for 6,000 pounds of *extracted* honey years ago. He also tells about a man he lately visited in Arizona who had about 300 colonies in one apiary, and averaged more than 200 pounds per colony! But Mr. Root thinks bee-keeping is a most risky business. By a little carelessness or bad management a man can in a short time lose all. But he can pick up again with marvelous rapidity. A hundred colonies may be cut down to half a dozen in wintering; but if a man is informed and full of grit he may also have his empty hives refilled in one season.

◆

This is a Good Time to attend to the payment of subscriptions to the Bee Journal—before the busy time of spring comes on. This is a matter that we dislike very much to refer to in public print, and yet if the financial end of the business of publishing this paper is not carefully lookt after, the whole thing would soon come to a finish. So we trust those whom we have patiently waited on will at once pay up, and also send the dollar due for this year. How many will during February send in their remittances, and thus again be square on our books?

THE WEEKLY BUDGET

Hon. Eugene Secor, General Manager of the United States Bee-Keepers' Union, was also President of the Farmers' Institute held at Forest City, Iowa, Feb. 8, 9 and 10. At that meeting Mr. Secor was down on the program for a talk or paper on "The Ideal Farm Home." Of course it was a *homely* subject, but no doubt it was treated in a handsome and satisfactory manner.

Mr. A. I. Root is nothing if not accommodating, so seeing that Mr. and Mrs. Boyden (his newly-wedded daughter and her husband) could not take an extended wedding-trip on account of their being needed in the office, he (A. I. R.) kindly consents to take it for them—going to the Bermuda Islands, where he will incidentally learn about onions, potatoes and things.

Mr. Jacob Dickman, of Defiance Co., Ohio, who is a regular reader of the American Bee Journal, sent his report for 1897 to the Ohio Farmer, and it appeared in that paper for Jan. 6. Two paragraphs of his report read as follows, his honey being extracted:

"The yield of our scale hive the past summer has been somewhat marvelous. At least we have heard of none better. The entire yield was 396 pounds, besides enough for winter. The daily increase during part of the best flow was from 18 to 23 pounds.

"The flow the past summer continued a longer time than we ever knew of before, and our entire yield from 50 colonies, spring count, gave us 10,175 pounds, an average of 203½ pounds, and we increast to 103 colonies. Counting the new colonies worth $2 each—and they are certainly worth more—and the honey worth 10 cents per pound, the profits for the season would be equal to a crop of 6,391 bushels of corn, or a crop of over 225 tons of hay. Whether the business pays or not, let the roader decide."

Mr. W. H. Pridgen is a "queenly" deceiver. You know how angry you feel when you are beguiled into reading an advertisement when you expected something else, and you know how common the trick is. Well, this man Pridgen has gotten up a pamphlet of a dozen pages, and the title page reads, "Pridgen's Catalog and Price-List of Queens, together with combined and improved methods of Queen-Rearing." Then you look through the pamphlet expecting to see a page or less of stale matter about rearing queens, and all the rest of it advertising matter. That's where you're fooled. Just one page is all he takes to blow his own horn, and the rest is interesting, useful matter about queen-rearing. If he fools his customers the same way when sending out queens, he'll work up a big trade.

Mr. S. M. Brooks has been keeping bees for several years five miles directly west of the Chicago court-house. Last season, with 28 colonies in the spring, Mr. B. increast to 54 colonies, and took 2,000 pounds of comb honey, and 200 of extracted. It is right in the midst of any quantity of sweet clover, but being built up so fast Mr. Brooks will now remove to Stark county, Ind., where he has traded his Chicago property for a 126-acre farm, expecting to go into bee-keeping more extensively there.

Mr. John Denyer, formerly of Middlesex Co., N. J., has removed to Northampton Co., Pa., where he purchast a homestead, and will run the bee and chicken business. Mr. Denyer has been managing several apiaries, but will now combine them at his new place. His partner, A. C. Ramsey, is an experienced apiarist and poultryman. Mr. D. is also a railroad signal inspector.

Hon. Geo. E. Hilton, of Newaygo Co., Mich., gave us a very pleasant call Feb. 8. Mr. Hilton has recently been appointed postmaster for his town, and will enter upon his duties April 1. He is not only a honey-producer, a bee-supply dealer, and a busy churchman, but also a good deal of a politician. He has some 300 colonies of bees, and will have them in three apiaries the coming season.

Mr. Joseph A. Shone, a bee-keeper in Benton Co., Miss., died at the age of 68, Sept. 20, 1897, leaving 93 colonies of bees, but his wife, unfortunately, is not able to care for them. She writes that there is no other apiary in that vicinity, that their bees have done well, and that they can sell all the surplus honey in the home market. Mr. Shone was for years a reader of the Bee Journal, which Mrs. Shone says they "liked so much."

Dr. Wm. F. McDonald, of Essex Co., Mass., is a bee-keeper as well as a tooth-doctor. He has sent us a newspaper account of a lively experience he had last July in hiving a swarm in the city where he lives. He keeps his bees on the roof of a three-story brick building, and says that in his family they have consumed about 400 pounds of honey in less than two years. That ought to be, and doubtless is, a very sweet family.

Catalogs for 1898 have been received at this office from the following who advertise in the American Bee Journal:

G. B. Lewis & Co., Watertown, Wis.—Bee-Keepers' Supplies.
Geo. E. Hilton, Fremont, Mich.—Bee-Keepers' Supplies.
J. D. Givens, Lisbon, Tex.—Queen-Bees.
Geo. H. Stahl, Quincy, Ill.—Incubators.
Leahy Mfg. Co., Higginsville, Mo.—Bee-Keepers' Supplies.

BEEDOM BOILED DOWN.

The Price of Success.—"I never saw a successful bee-keeper who was not, in all kinds of weather, thinking about his bees."—C. P. Dadant, in Busy Bee.

* * *

Saving Sweet Clover Seed.—"I once gathered a bushel in two hours by pushing an inverted umbrella up close to the stalk, and an assistant bent the stalks over it and beat off the seed with a stick."—J. B. Hains, in Gleanings.

* * *

Ups and Downs.—In 1896 Dr. Stell was reported in Southland Queen as producing in Mexico from 10 colonies 1,500 pounds of honey that he sold at a dollar a pound. In 1897 the case is reverst. From 18 colonies increast to 40, he got only 22 pounds of honey after paying out $240 for supplies.

* * *

Extracting in Parts.—Hasty in Review thinks it might be a good plan to avoid extracting unripe honey to have two extracting-supers on at a time, extracting alternately, or else having only one super and extracting alternately the two halves, thus giving a chance for better ripening to the part to be extracted.

* * *

Wax in Bee-Glue.—M. Bertrand, editor Revue, sent to Dr. de Planta a sample of the material used by bees to contract the entrance of a straw hive. The analysis showed: Beeswax, 76.27; resin (propolis), 22.15; water and volatile oils, 1.58; total, 100. Probably many bee-keepers would be surprised to find the large amount of wax they could secure by melting up what they may think pure propolis.

* * *

Are Drones a Help to Workers?—Some think that workers are more energetic if drones are present in the colony. Editor Hutchinson thinks that even if the presence of drones is an encouragement to the workers, there's no need of a big lot. He says: "Two or three hundred in each colony, if they are anyways smart drones at all, ought to be able to give the workers all of the 'patting on the back' that is necessary."

* * *

The Bee Not Cold-Blooded.—Karl Gruendig, in deutsche Imker, combats the assertion of Dzierzon that the bee has no heat of its own, but takes the heat of surrounding objects. Because a bee becomes chilled and apparently lifeless when separated from its companions, it is subjected to a temperature of 40°, and it is not safe to assume that it has no heat of its own, no more than it would be right to say a man is cold-blooded because when the temperature is low enough he freezes.

* * *

Peep-Holes and Plain Sections.—A strong point claimed for plain sections with fences is the lack of peep-holes in the corners. S. A. Niver asks Gleanings not to put that point *too* strong, continuing, "There are peep-holes in *every* box of honey Morton has ever produced. Danzenbaker had *one* section with nary a peep-hole—the only one I ever saw. To be sure, the fence helps to reduce the *size* of 'em, but they are *there* all the same." But W. D. Soper says L. A. Aspinwall has 3,000 pounds in plain sections worth seeing, "square as a piece of plank, and no holes in corners at all." Niver's sharp eyes are pretty reliable.

* * *

Plain and Old-Style Sections.—Over the title, "An Object-Lesson in Comb-Building," the Review gives a delightful full-page half-tone picture of four plain sections beautifully filled with four old-style sections placed over them, decidedly to the disadvantage of the latter. The old-style sections lack *very* much of being filled out as well as the others. The editor says "it is a fair representation of such honey that *I* have seen produced in the two classes of sections." It would be much more to the point if he could have said, "These sections were produced by the same bees at the same time in the same super."

* * *

Profits of Bee-Keeping.—The editor of Gleanings has been trying to get Dr. Miller to tell what his 1897 crop of 17,000 pounds of honey cost in labor. "After some thinking, estimating and guessing," the Doctor makes out about 293 days at 10 hours each as the amount of time occupied with the bees for the year, supposing that one person had done everything. As a matter of fact, the work was mainly done by two persons, making the time for each less than half the working days of the year. Three-fourths of the work came between May 1 and Oct. 1. Then the editor makes an estimate after deducting expenses for supplies, interest, etc., and counts that if the Doctor got 10 cents for his honey it would leave $5.00 per day for the labor. But fairness obliges him to admit that such results are not attainable every year.

* * *

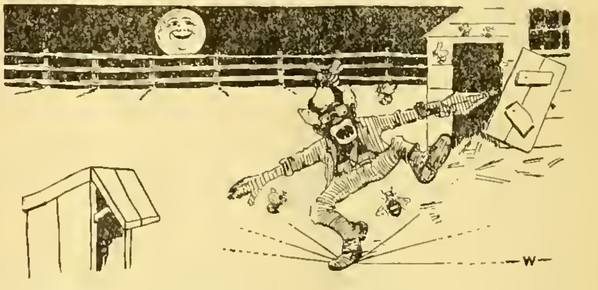
A New Theory.—Herr Ludwig has evolved a theory that is considered of sufficient importance to allow A. Bohnenstengel to occupy more than four pages of Imker aus Boehmen in refuting it. Instead of a worker or a queen proceeding from the same germ, according to the food given, the theory is that every fertilized egg contains two different germs, one capable of producing a queen, the other a worker. Under ordinary circumstances the worker is developt, and under extraordinary circumstances the queen, and a nurse-bee has three different glands by which it can at will give food that will awaken the latent drone, worker or queen germ. The theory will hardly gain general credence.

* * *

"**Hybrid Bees** are not, as a rule, so pleasant to handle as are the pure Italians," says Editor Hutchinson in the Review. "Mr. Whitcomb, of Nebraska, explains this on the ground that it takes longer to subdue the hybrids. We can give the Italians a few whiffs of smoke and then go right to work handling them. Not so the hybrids. First give them some smoke and then busy yourself with something else for a few minutes; then give them some more and wait a little before opening the hive. The point is that it takes longer to subdue them, but once they are subdued Mr. Whitcomb says they are as easily handled as the pure Italians."

* * *

Preventing After-Swarms.—The favorite way with many is to set the swarm in the place of the old colony, putting the old colony at the time, or a week later, in a new place, thus weakening the old colony so it will give up swarming. But L. Stachelhausen objects to this plan in Texas, as he wants the mother colony to remain strong enough to yield a surplus. Cutting out cells immediately after swarming will not do, as the bees may start new ones. So he gives a virgin queen to the old colony as soon as it casts a swarm, lifting a corner of the enamel cloth and letting the queen run down with as little disturbance as possible, and in nine cases out of ten the young queen is accepted—Southland Queen.



No. 3—Deacon Johnsing—"Lawd! Lawd! Dat roost mus' be on fiah!

Spelling Reform Again.—In the Chicago Post of recent date we find the following:

> "The editor of a leading London daily newspaper has received a number of urgent protests against his recent adoption of the American omission of the 'u' in words labor, and the cutting off of the final 'me' in programme. The protests argue that the best American writers and publishers themselves are showing a desire to abandon this, as they think it a butchery of the English tongue."

We wonder if some of our conservative friends who object to spelling "stopt" instead of "stopped" are willing to join the backward reform to write "labour," "honour," etc. Then if that is done, they can hardly stop logically of going back to earlier forms still, giving a language that people now living couldn't read at all. Fact is, some good people can't stand any reform, however good, if it's different from what they were brot up to.

GENERAL ITEMS

Good Honey Crop.

My crop of honey was extra large, the best I have had in years, and the quality was fair. We had no basswood flow.

Oakland Co., Mich. HOMER SCOTT.

Wintering Nicely.

I have 39 colonies of bees which seem to be wintering nicely in the cellar. I am a farmer, but have no trouble selling my honey at home at 10 cents per pound.

Trempeleau Co., Wis. L. STAHOSKI.

Report for 1897.

I could not get along without the American Bee Journal. My 1897 report is as follows: From 52 colonies I secured very nearly a ton of honey, and I have sold about half already at a good figure.

HENRY K. GRESH.
Elk Co., Pa., Dec. 11.

Results of the Past Season.

I had 5 colonies, spring count, increast to 8, and got 480 pounds of comb honey. I believe I have gotten more experience in one year from the American Bee Journal than I could have gotten without it in 10 years. I don't see how anybody can keep bees without it. J. W. HENRY.

Warren Co., Pa., Jan. 8.

Good Year with the Bees.

I have had the American Bee Journal four months, and now feel that I could not do without it.

I have had a very good year with the bees, securing about 450 pounds of honey (both comb and extracted) from six colonies, and increast to 11.

GEORGE DALES, JR.
Summit Co., Ohio, Jan. 10.

Results of the Past Season.

I started in the spring of 1897 with 15 colonies, workt on the Doolittle plan. I had 5 swarms, caught and bought 10, and went into winter quarters with 30 colonies, all in good condition. I got about 740 pounds of honey, all in one-pound sections. Now I might have gotten the 40 pounds alone, but I think the 700 due to the help of the American Bee Journal. SAMUEL RICKEL.

Fulton Co., Ind.

A Reasonably Good Year.

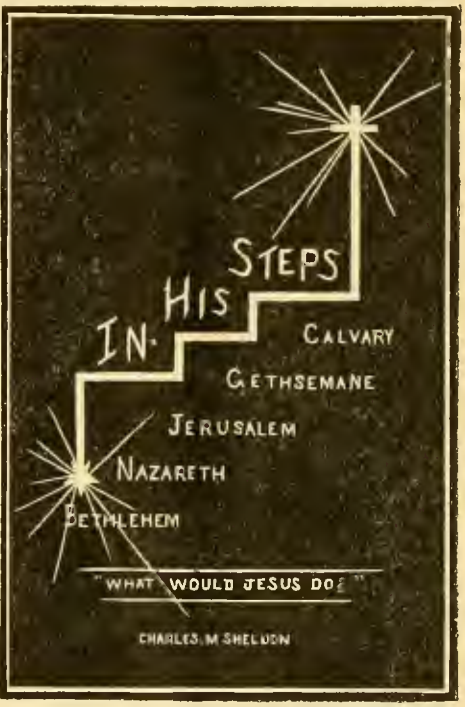
I keep all the copies of the Bee Journal, and they are of more value to me than many times its cost.

I had a reasonably good year in 1897 with the bees. I had 11 colonies, spring count, secured 500 pounds of comb honey, and increast to 25 colonies. I would have done better but we had a terrible hail storm June 19, which cut the white clover all down, and it took about two weeks for it to bloom again. S. H. STOUFFER.

Blair Co., Pa.

Wintering and Other Experiences.

It was a clear, sunshiny day here yesterday, and I found a number of drones on the snow in front of one of my colonies, and the bees show signs of dysentery badly. All others are all right. I had a swarm issue October, 1897, that had only bees enough to cover one frame. I put them into the cellar. There is a steam furnace 10 feet from the hive. I lookt into the hive last night, and the bees cover three frames now. The thermometer stands at 50 degrees steadily; in a warm day it goes up to



This Very Remarkable Social Story,

The thought of which is the application to all life of the test question, "What would Jesus do?" has had an extraordinary sale, even during the "dull times" of summer. In the guise of a dramatic story, the book makes a powerful appeal to the public conscience in the lines in which interest is now so deeply aroused, namely, the social conditions affecting the relations of employer and employe, rich and poor, the Christian and the world, the saloon and the voter, etc. The author believes his test—"What would Jesus do?"—to be nothing less than revolutionary, and applies it with searching directness, not only to commercial and social, but also to religious life. The deep interest which the story has awakened is indicated by the thousands that have been sold, and the many voluntary testimonials, among them being the following:

"The reading of the book will search many a heart, and ought to lead to a simpler, holier, and more fully consecrated Christian life."—Sunday-School Times.

"Singularly impressive....It is a sermon in action, and one that cannot fail to touch the heart."—New York Christian Advocate.

"Mr. Sheldon's book makes a strong impression as a plea for more simplicity of living, for more economy and more principle in the matter of personal expenditure, and for the application of tho laws of righteousness and justice to the methods of busi- administration."—New York Independent.

Size 5x7¼—nearly 300 pages.

Price, in paper cover, 25 cts., postpaid; bound in cloth, 75 cts. Or, we will mail a copy of the paper-covered edition for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00, or for sending us TWO NEW subscribers we will mail you a copy of the cloth-bound edition. We will send the paper-covered book and the Bee Journal one year—both together for $1.10; or the cloth-bound book and the Bee Journal one year—both for $1.50. Address,

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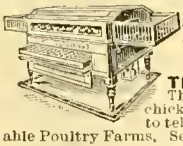

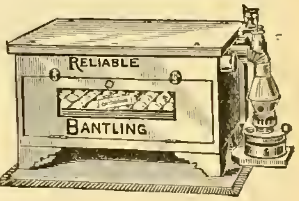

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and in the production and brooding of chicks she has been supplanted by the better and everyway
RELIABLE INCUBATORS AND BROODERS
They Hatch and Brood when you are ready. They don't get lousy. They grow the strongest chicks and the most of them. It takes a 224 page book to tell about these machines and our Mammoth Reliable Poultry Farms. Sent by mail on receipt of 10 cents. Send for it now.
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37D17t Please mention the American Bee Journal.

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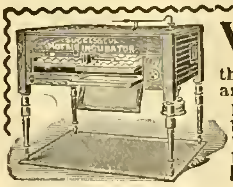
MORTGAGE LIFTER

$300. for Six Potatoes!
We shall introduce this year for the first time the wondefrul new **MORTGAGE LIFTER POTATO** and shall pay the above sum in prizes for the **best six potatoes grown from one seed potato. THE EARLIEST POTATO IN THE WORLD.** Tested 4 years. It is white, of excellent quality and **A MAMMOTH YIELDER.** Be the first in your neighborhood to try it; next year you can sell it to others. Price this year, **50 cents for Single potato.** **First in the Market Cabbage** is the earliest to head; beat your neighbors by weeks. **Sure Head Cabbage,** all head and sure to head; large size, good quality and good keeper. Single heads have weighed up to 60 lbs. **Climbing Cucumber,** entirely new—a perfect wonder. Climbs any trellis or support 6 to 8 feet high; prolific early fruiter. **Six Week's Turnip;** earliest grower, easy grown, good size and white as snow. **EARLIEST TOMATO IN THE WORLD—greatest success for earliness, smoothness and quality. Has fruited in 50 days. Big Prizes Awarded** for ripe tomatoes grown in least number of days. Instructions with seed. ☞ One whole potato by mail (packed from frost) instructions for prizes and a packet each of the five early vegetables and catalog of "**SEEDS THAT GROW**" for **25c.** ***Fairview Seed Farm,*** *Box 88* ***Rose Hill, N.Y.***



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Address, **W. P. Ennor, E. Dubuque, Ill.**
Please mention Bee Journal when writing.

FIRST PRIZE WINNERS
Our 1898 Mammoth Poultry Guide of 100 pages **mailed FREE.** Something entirely new, tells all about poultry, how to be a winner, how to **MAKE BIG MONEY.** Contains beautiful lithograph plate of fowls in their natural colors. Send 15 cts. for postage. **JOHN BAUSCHER, Jr. Box 94 FREEPORT, ILL.**
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We have a limited number of barrels of **very best Basswood** Extracted Honey, weighing NET about 280 lbs. which we are offering at 6 cents per lb. f. o. b. Chicago. Do you want a barrel or so of it? If so, address, with the cash,

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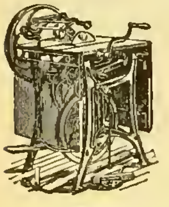

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via Nickel Plate Road, to Cleveland and return February 22nd and 23rd, 1898, account Students' Volunteer Movement for Foreign Missions. Return limit February 28th. City Ticket Office, 111 Adams St.; Depot, corner Clark and 12th Sts.; Telephone, Main 3389. (2)

Bee-Keeper's Guide—see page 92.

60 degrees, then I open the windows on two sides of the cellar. The bees hum like boiling water. Before putting into the cellar I tackt wire screen on the bottom of the hive, and two-inch pieces under the hives on the sides and back, on top of the bottom-boards, I put the front side next to the wall, because the cellar is light. I put an empty super on top, and a loose cover on that. The hive sets on a frame 16 inches from the ground, with six frames nearly full of honey, and two empty combs. I hope they will come out all right.

Last season I kept a queen-cage on one hive to keep the bees from swarming, and got 108 pounds of comb honey from that colony. I got 90 pounds from two others that did swarm. I have 20 colonies now. In September I took two colonies from bee-trees. I could find no queen, so I gave them queens, fed sugar syrup, gave them full frames of foundation, and they went into winter quarters all right.

C. G. ASCHA.
Berkshire Co., Mass., Jan. 9.

Experience with Bees.

In the fall of 1894 I started with one colony, which I had to feed in 1895 to keep it and two others from starving, and they came out all right in the spring of 1896. I got about 175 pounds of honey, and increast to 11. They wintered all right, and came out in good condition last spring. The past season was pretty good. I secured something like 500 pounds of honey, and increast to 20 colonies, which I have now in winter quarters in fair condition.

C. H. VOIGT.
Manitowoc Co., Wis., Dec. 28.

Not Very Enthusiastic.

I am not very enthusiastic. I have over 100 colonies of bees, and my honey costs me 50 cents per pound. The bees did well for about three weeks, filled up the brood-chamber and some surplus, then the drouth came on, and they stopt breeding, and gained no weight afterward. The bees that went into winter quarters were old ones that workt in the field the forepart of the season.

I am almost an octogenarian, and hardly feel able to take care of so many bees, but people here don't want to buy bees—they prefer that I take care of them and let them have the honey for 8 or 10 cents per pound.

A. F. CROSBY.
Franklin Co., Iowa.

A Little Discouraged.

The honey crop was so light and price of honey so low that some of our numbers have become discouraged, and will quit the business. I have been in the business 30 years, and have a good location, but the past was the poorest season I ever knew, in all respects. I have known seasons when there was less honey gathered, but I never saw such poor quality. Whether the bees will winter on the honey remains to be seen, and makes but little difference—it will be the easiest way to get rid of them. To sell them would be almost impossible. I feel a little discouraged. But send on the Bee Journal all the same.

H. ROOT.
Onondaga Co., N. Y., Dec. 18.

Large-Entrance Advice Criticised.

The big heads of the fraternity are recommending large entrances to hives; according to them, ¾ inch or 1 inch, back and front of the hive, is none too large. It seems to me that such advice is misleading, and may cause serious losses to beginners. That the entrance should be very large during winter in the cellar-wintering, and during the big honey-flow (that is, from June 15 to Aug. 15, or thereabout, in my locality—Montreal), that sounds all right. But I should think that in the spring and fall the entrance should be regulated in such a way as not to entice robber-bees.

But, you will say, What about ventilation? Well, I think that both ample ven-

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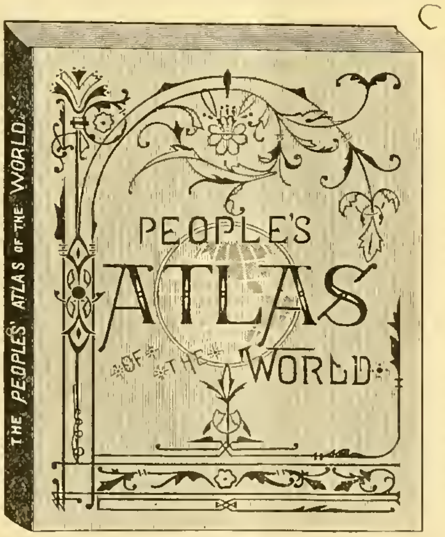
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tilation and proper entrance may be combined, viz.: by using wire-cloth or perforated zinc applied to the entrance.

I would say, give all the time ample ventilation, but regulate the entrance according to the time of the year, or strength of the colony.

Now you may, if you please, criticise my criticism. H. DUPRET.
Province of Quebec, Canada.

Bees in Good Condition.

Bees went into winter in good condition in our part of Indiana, altho bees are scarce, nearly all dying last winter.
Noble Co., Ind., Jan. 24. S. Black.

Good Year with the Bees.

The past was a good year with me. I averaged 100 pounds of comb honey to the colony, spring count, and increast to 11 colonies. J. C. SMAIL.
Hancock Co., Ind., Jan. 13.

Bees Were in Good Condition.

Our bees were put into the cellar Nov. 22, in good condition The hives were well filled with good, well-ripened honey, and as they went in with a good force of young bees, I expect them to winter well. The weather is mild. F. A. SNELL.
Carroll Co., Ill., Jan. 18.

Bees Did Well Last Year.

My bees did very well last year, as I started with 18 colonies and increast to 22, extracted about 2,200 pounds of honey, and got 300 pounds of comb honey from three colonies. I winter my bees in cases packt with straw. M. M. RICKARD.
Erie Co., N. Y.

Poor Year for Honey.

Last year was very poor for honey in this part of the State, altho last spring there was big promise for white clover—I never saw it thicker. Basswood was a complete failure, also willow-herb, but the bees filled their brood-chambers and gave a few finisht sections of honey from golden-rod.

What has become of E. J. Cronkleton with his bee-escape ?

By the way, I have invented something, too, in the shape of a bee-hunting box, that works like a charm. I may tell about it sometime. GEO. W. BLAIR.
Mason Co., Mich.

[We do not know what Mr. Cronkleton did with his invention. Perhaps he will tell us.—EDITOR.]

Prospect for an Early Crop.

The "Old Reliable" arrives weekly on Monday evening, and every number brings something new and interesting to a beginner. I am so much pleased with it; could not keep bees without it now.

Bees did not do very well last season, but they are wintering well so far, and the prospects are good for an early spring, which means a good flow of nectar. Long life to the editor of the Bee Journal!
J. T. HEWETT.
Whatcom Co., Wash., Jan. 22.

Supporting the Unions.

I am one of the old members of the National Bee-Keepers' Union, and as such I still stick to it. The old Union has done a great deal of good for the bee-keepers, and I am frank to say that I am somewhat partial in its favor, and see no reason why its name should be changed.

It is my opinion that a division of our forces could have, and ought to have, been avoided. In unity there is strength; divided we can do but little.

A true and faithful servant should under all circumstances receive considerate treat-

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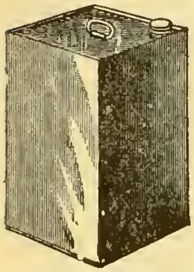

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ment. I cannot help but feel kindly towards Mr. Thomas G. Newman. At the same time, the common good requires that both Unions should combine and become "one." I may, or I may never, require the help or support of either of the Unions, but I will do my share in helping matters along as best I can. WM. STOLLEY.

Hall Co., Nebr.

* * *

Bees Snowed Under.

One-fourth of my bees are completely covered with snow drifts; the other ¾ are snowed under about two feet. They are all packt in sawdust, and will not feel the snow. I shall let them remain as they are till the snow settles some, if soon, and then shovel some of them out, and see how they stand it. T. F. BINGHAM.

Clare Co., Mich., Jan. 26.

The Nickel Plate Road

will sell excursion tickets to Cleveland and return at $8.50 for the round-trip, account of Students' Volunteer Movement for Foreign Missions, Cleveland, O., February 23-27, 1898. Tickets will be sold February 22nd and 23rd, good returning up to and including February 28th. Three through trains daily in each direction. Day coaches in charge of colored porters. Every facility afforded for the comfort of the traveling public. City Ticket Office, 111 Adams St.; Depot, corner 12th and Clark Sts.; Telephone, Main 3389. (1)

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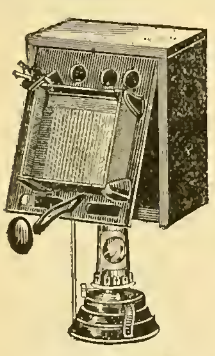

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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Ill., Feb. 11.—Fancy white is not plentiful, and sells at 11c.; good No. 1, or grade of that character is abundant, and sells at 7 to 9c.; amber and dark, 7 to 8c. Extracted, white, 5 to 6c.; amber, 4 to 5c.; dark, 4c. Beeswax, 26 to 27c.

Much of the comb honey is candying this season, especially if any sweet clover is in it.

Detroit, Mich., Feb. 1.—Fancy white, 11 to 13c.; No. 1, 10 to 11c.; fancy amber, 9 to 10c.; No. 1, 8 to 9c. Darker grades are selling lower and in better supply, and can be bought at 6 to 7c. Extracted, white, 5 to 6c.; darker grades, 4 to 5c. Beeswax is in good demand at 26 to 27c.

Indianapolis, Ind., Jan. 15.—Fancy white, 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand.

Milwaukee, Wis., Jan. 24.—Fancy white 1-lbs., 11 to 12c.; A No. 1, 11 to 11½c.; No. 1, 10 to 11c.; No. 2, 8 to 9c.; No. 1 dark, 8 to 9c. Extracted, in barrels, kegs and cans, white, 5½ to 6c.; dark, 5 to 5½c.

The supply of honey is good and the quality very nice as a general thing. The demand is not up to our desires, yet we are hopeful it will improve and all will be wanted at fair value. We feel like sustaining prices, and continue to quote as above.

Cleveland, Ohio, Dec. 15.—Fancy white, 12 to 12½c.; No. 1, 11 to 12c.; No. 1 amber, 9 to 10c. Extracted, white, 6 to 7c.; amber, 4 to 5c. Beeswax, 22 to 25c.

St. Louis, Mo., Feb. 9.—Fancy hite comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

Boston, Mass., Jan. 18.—Fancy, in cartons, 12½ to 13c.; in glass, 11 to 12c.; A No. 1, 10 to 11c.; No. 1, 9c.; No. 2, 8c.; No. 3, no sale. Beeswax, 27c.

The demand for honey is light on all grades, with a full supply. Pure beeswax is in good demand, but supply is light.

Philadelphia, Pa., Jan. 18.—Fancy white, 10c.; No. 1, 9c.; amber, 8c. Extracted, white, 5c.; amber, 4c.; dark, 3¾c. Beeswax, 28c.

Late arrivals of California honey have demoralized our market.

Kansas City, Mo., Feb. 9.—Fancy white comb, 1-lbs., 10c.; No. 1, 9c.; amber, 8c. Extracted, white, 5 to 5 1-2c.; amber, 4 to 4 1-2c. Beeswax, 20 to 22c.

The supply of honey is large and the demand light.

Cincinnati, Ohio, Feb. 8.—There is a slow demand for all kinds of honey. We quote 10 to 13c. for best white comb honey, and 3 1-2 to 6c., for extracted. Beeswax is in fair demand at 20 to 25c. for good to choice yellow, with a fair supply.

San Francisco, Calif., Feb. 2.—White comb, 1-lbs., 7½ to 9½c.; amber, 4 to 6c. Extracted, white, 4½ to 5c.; light amber, 3½ to 4c.; dark tule, 1¾ to 2¼c. Beeswax, fair to choice, 22 to 24c.

Buffalo, N. Y., Feb. 11.—Strictly fancy 1-pound combs are in quite good demand from the fact that it has been so scarce and closely cleaned up, and 11c is quite easily obtained. Other grades do not sell much better, possibly a little, ranging from 9 to 6c., as to grade, etc. Extracted ranges from 4 to 6c., and is in light demand. We can recommend shipping strictly fancy and nothing else, unless you cannot do better.

New York, N. Y., Feb. 9.—There has been a fair demand for comb honey of late, and we are gradually reducing our stock. Fancy white is scarce and finding ready sale at 10 to 11c; off grades white and amber, 8 to 9c.; mixt and buckwheat, 6c. Extracted is in fair demand—California white, 5½c; light amber, 5c.; white clover and basswood, 4¾ to 5c.; buckwheat, 4c.; Southern, 50c. a gallon. Beeswax is steady at 26 to 27c.

Minneapolis, Minn., Jan. 31.—Market is in an overloaded condition on comb honey. Good chance for fancy white extracted at 5¾ to 6c., but comb is at a standstill, particularly if other than fancy white. Best price available on fancy white comb is 10½c., and buyers are slow at that. Darker grades or broken lots are unsalable. If shippers would send in their extracted when it is wanted, and not push undesired comb [and vice versa] the stuff would move more advantageously to all concerned. The trouble is, when a fair price is obtainable some shippers hold out for more and in the end lose by it.

List of Honey and Beeswax Dealers.

Most of whom Quote in this Journal.

Chicago, Ills.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.
HILDRETH BROS. & SEGELKEN,
120 & 122 W. Broadway.

Kansas City, Mo.
C. C. CLEMOMS & Co., 423 Walnut St.

Buffalo, N. Y.
BATTERSON & Co., 167 & 169 Scott St.

Hamilton, Ills.
CHAS. DADANT & SON.

Cleveland, Ohio.
A. B, WILLIAMS & Co., 80 & 82 Broadway.

Philadelphia, Pa.
WM. A. SELSER, 10 Vine St.
Mr. Selser handles no honey on commission

St. Louis, Mo.
WESTCOTT COM. CO., 213 Market St

Minneapolis, Minn.
S. H. HALL & Co.

Milwaukee, Wis.
A, V. BISHOP & Co.

Boston, Mass.
BLAKE, SCOTT & LEE., 57 Chatham Street.

Detroit, Mich.
M. H. HUNT, Bell Branch, Wayne Co., Mich.

Indianapolis, Ind.
WALTER S. POUDER, 162 Massachusetts Ave.

Albany, N. Y.
CHAS. MCCULLOCH & Co., 380 Broadway.

Cincinnati, Ohio.
C. F. MUTH & SON, cor. Freeman & Central Ave.

Bee-Keepers' Photograph.—We have now on hand a limited number of excellent photographs of prominent bee-keepers—a number of pictures on one card. The likeness of 49 of them are shown on one of the photographs, and 121 on the other. We will send them, postpaid, for 30 cts. a card, mailing from the 121 kind first; then after they are all gone, we will send the 49 kind. So those who order first will get the most "faces" for their money. Send orders to the Bee Journal office.

Texas.—The Texas State Bee-Keepers' Association will hold its annual convention at W. R. Graham & Son's, Greenville, Texas, the first Wednesday and Thursday in April, 1898. All interested are invited.

W. H. WHITE, Sec.

DO NOT FAIL TO WRITE US FOR PRICES ON THE——

ONE-PIECE SECTION

In both Small and Large Quantities....

We have all the up-to-date Machinery, and our lumber is as white as snow..

THE ONE-PIECE SECTION COMPANY,

Prairie Du Chien, Crawford Co., Wis.
February 10th, 1898. 7Ctf
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are warranted

Superior to All Others.

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36 Pages—50 Cents a Year.

Sample Free—Address,

THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

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105 Park Place, is the street,
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Who is prepared to ship you, on short notice, **anything** in the apiarian line.

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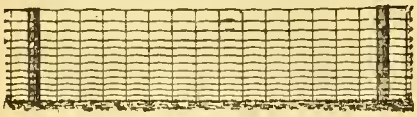
Please mention Bee Journal when writing.



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Page Fence **must** be made of superior material if the coil in the wire is to continue, year after year, to "give and take." More elasticity always means greater tensile strength.

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Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**
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Because **IN 21 YEARS** there have not been any complaints, but thousands of compliments.

We Guarantee Satisfaction.

What more can anybody do? **Beauty, Purity, Firmness, No Sagging. No Loss. PATENT WEED PROCESS SHEETING.**

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The Classic in Bee-Culture—Price, $1.25, by mail.

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OUR MOTTO—"Well Manufactured Stock! Quick Shipments!"

SECTIONS, SHIPPING-CASES,
—AND—
BEE-KEEPERS' SUPPLIES.

We make a specialty of making the very best Sections on the market. The **BASSWOOD** in this part of Wisconsin is acknowledged by all to be the best for making **the One-Piece Honey-Sections**—selected, young, and thrifty timber is used.

☞ Write for Illustrated Catalog and Price-List FREE.

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Reduced Prices

On 1896 Style Hives.

In order to make room for stock of New Goods at our Chicago Branch, we offer the following list of 1896 Hives at these reduced prices to close out quick:

		5	10	20
75 No. 1	8-frame	$5.00	$9.00	$17.00
35 No. 1E, P. W.	"	4.00	7.00	13.00
90 No. 1, "	"	5.00	9.00	17.00
40 No. 5E	"	5.00	9.00	17.00
65 No. 5	"	6.00	11.00	21.00
25 No. 6E	"	4.00	7.00	13.00
20 No. 6	"	5.00	9.00	17.00
45 No. 5E	10-fr.	5.50	10.00	19.00
30 No. 5	"	6.50	12.00	23.00
25 Townsend Section-Presses				50 cts. each.
13 Wakeman & Crocker Section-Presses				$1.00 "

Note.—The 1896 No. 5 Hives include a honey-board as well as foundation starters, and the No. 5E have these omitted. The No. 6 have the D section-case arrangement, complete with sections and starters; and the No. 6E the same, without the sections and starters.

Better order at once if you want any of the above list. All are bargains, for they are exactly as well made in every way as our later hives. Address,

THE A. I. ROOT CO.
118 Michigan Street, **CHICAGO, ILL.**

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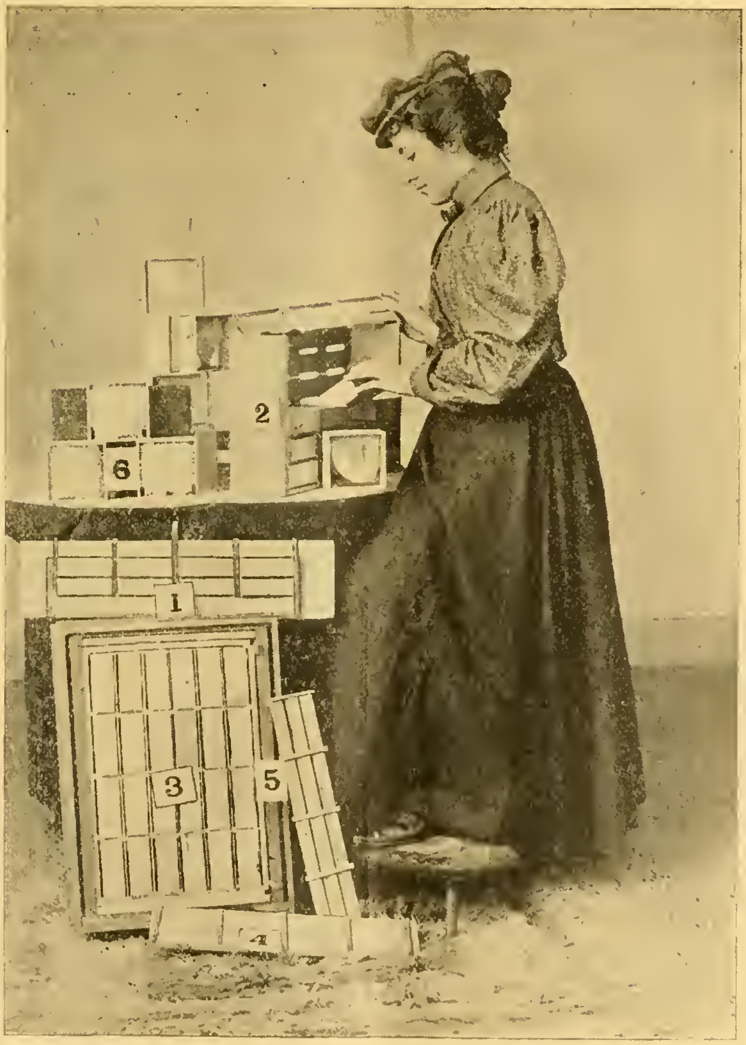
Publisht Weekly at 118 Michigan St. George W. York, Editor. $1.00 a Year—Sample Copy Free.

38th Year. CHICAGO, ILL., FEBRUARY 24, 1898. No. 8.



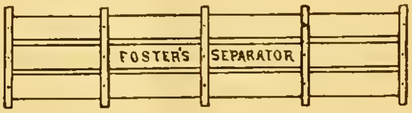
Golden's Super for Plain Sections and Fence.—(See page 115.)

CONTRIBUTED ARTICLES

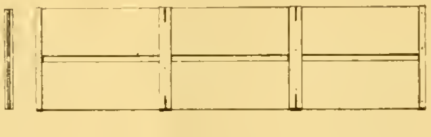
The New No-Bee-Way Section and Double-Cleated Slat Separator or Fence.

These two articles seem to be making quite a stir among some of our cotemporaries; and as there seems to be some inquiry in regard to them among the readers of the American Bee Journal, perhaps a brief description and discussion of them may not come amiss.

Fifteen years ago sections having top and bottom of equal width with the sides were manufactured and sold by Mr. G. B. Lewis, of the G. B. Lewis Co. Just how these sections were used at that time by bee-keepers who bought them is not definitely known; but in all probability they were spaced apart without separators. This would cause the combs to be bulged unequally, and, as a result, such combs would be uncratable.



A few years later Oliver Foster, then of Iowa, conceived the idea of making double-cleated slat separators. With these separators he used plain sections—that is, those having top and bottom equal in width to the sides. A row of sections was set on a flat board, and up against them was placed a cleated separator; then another row and another separator, and so on. These were firmly clampt together and put on the hive. On the under side of the cleats was fastened a little strip of tin that projected out far enough to catch the corners of the sections. This was in 1888. The illustration herewith given will show the separator as he used it, and is very like those now manufactured and styled "fences," the last name being used, we suppose, because it was short and descriptive.



The B. Taylor Slotted Separator.

But for some reason or other these did not attract a great deal of attention at the time, altho we are informed that several bee-keepers throughout the United States began using them, and have been using them ever since. But no one seems to have said very much about them till along in 1895, when the late B. Taylor wrote up and described his double-cleated separators and 4x5 no-bee-way section. At that time he claimed he had been using them some four years; that they gave him perfect sections weighing a scant pound; that "the honey on both sides of the sections comes within ⅛ inch of the section, and is never broken in moving the separator, and the surfaces are ¼ inch apart in crating. In crating sections filled between common flat separators, the surfaces of the combs are ½ inch apart, and requires a larger crate for the same number of pounds." Mr. Taylor further claimed that he not only secured better-filled sections, but that their appearance was very much better.

Altho it appears that Mr. Taylor called Mr. Root's attention to this style of separator and section, the latter did not at the time enthuse very much over it.

Later on Mr. Danzenbaker began to talk of the merits of the plain section; and altho he tried to get the Root people to see their advantages when used in connection with cleated separators, they could not be made to "see." How blind some people *can* be when they *want* to be, and how wide awake they can be when they want to *see*. How is this, Mr. Root?

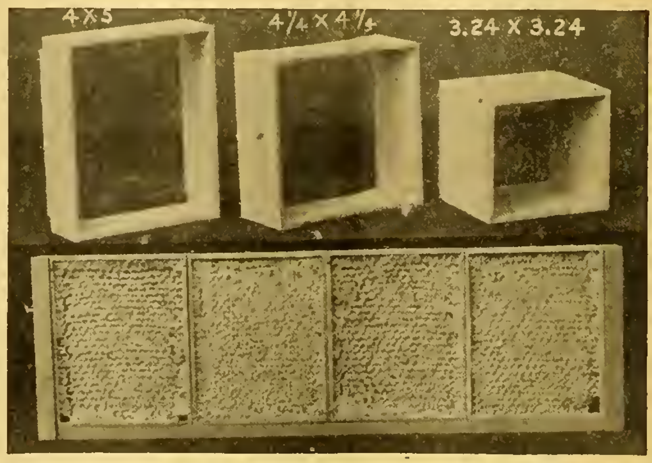
During the greater part of this time there were others who were using sections without insets or openings; but for some reason they said little or nothing about it in print; but it now turns out that Mr. L. A. Aspinwall, of Michigan, had been using plain sections in connection with the double-cleated *tin* separator for a number of years with a great deal of satisfaction. Aspinwall separators differ materially in construction from the "fences" that are now being talkt about. In each tin separator there were transverse slots stampt out of the metal, and coming directly opposite the uprights of the sections. Just above and below these slots are fastened short cleats that space and hold the separator a scant bee-space between the sections.

Mr. Aspinwall secures, in effect, sections open all around; and Mr. W. D. Soper writes of Mr. Aspinwall's honey that it was the finest he ever saw. The combs were filled clear out to the wood, and there were no peep-holes or openings in the corners of the sections. Mr. Aspinwall, however, says this statement is a little overdrawn, and that while the openings are small and scarce, there are occasionally some to be found.

Along in October last, Mr. Root, of Gleanings, suddenly became very much *awake* over plain sections and fences. When he saw them in use at the home and apiary of Mr. Miles Morton, of New York State, he says he did not entirely get hold of their advantages; but later, when he came home and saw Mr. Danzenbaker's beautiful honey, his enthusiasm for this kind of section and fences quite ran away with him. Mr. Root, you know, is a hobby-rider, and sometimes his hobby runs away with him. Whether the section-fence hobby will run away with him now remains to be seen. Among other things he claims as advantages for the plain sections and fence the following:

1. These fences are made entirely of scrap, and, consequently, will cost but little more than the old-style separator, which, after being used a year or so, had to be discarded.

2. Prettier and better filled comb honey can be secured with a fence, for the reason that the bees can crawl all through the slats, affording them easy and direct passage-ways from one honey-box to another. *One great objection to the old-style super with its separators is that it shut off each section-box into a compartment or room by itself;* and, as every one knows, it was much harder to get bees to enter comb-honey supers than supers of the extracting sort.



The Tall and the Square Section.

3. The peculiar construction of the fence will, we believe, largely do away with the passage-holes in the corners of the ordinary section honey-boxes.

4. The fact that the fence is made up of several different slats, bound by transverse strips on each side, and grooved cleats on each end. has a tendency to very materially stiffen and strengthen the section-holder. In case of the old-style super, the bottom-bar of the section-holder would sometimes sag; but the new fence is so much stiffer than the separator that we believe it will do away largely with the sagging of the bottom-bars.

5. The new section, when filled with honey, will bring a higher price, because they appear to be, and, in fact, are better filled out, and the surfaces of the combs themselves are more even—at least this seems to be the experience of those who have used such sections with a cleated separator or fence.

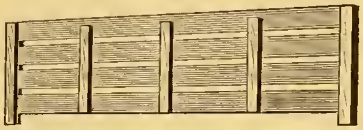
6. Facility in scraping these sections with their plain straight edges is quite an important feature. It is not an easy matter to clean out the insets of the ordinary old-style sections, and practically impossible to remove the *stain*. A case-knife or a piece of steel having sharp square edges will, with one sweep, clean almost the whole four edges of the new section at once.

7. The new section and fence greatly simplify the construction of the section-holder. The bottom instead of being scored out to correspond with the openings in the bottoms of the sections, is one straight piece, and of the same width as the section itself. The end-bars are also of equal width with the bottom-bar.

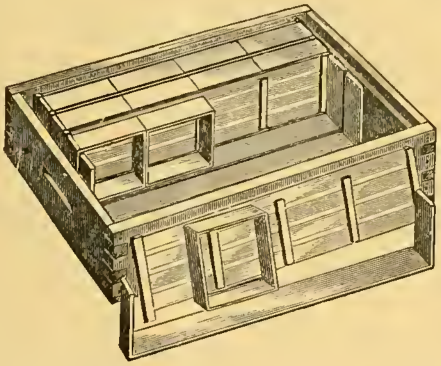
8. The new section is only 1½ inches wide, and yet will hold

as much honey as the old 1⅞ section with its openings when used with plain separators; and consequently the ordinary shipping-case will hold from 15 to 25 per cent. more honey, thus effecting a substantial saving in cases to the bee-keeper.

The fence and section that the Root people have fixt on are shown in the accompanying illustrations. The slats are ⅞-inch wide, and spaced 2/12 of an inch apart. The cleats are ½-inch wide by 2/12 thick. But some have asked, "Why 2/12?" Mr. Root says that is because, when the space is wider, say ¼ or 5/16, the bees are liable to ridge the honey opposite the openings. If these spaces are confined to the width of the perforated zinc, which are, in round numbers, 2/12 inch, he claims there will be no ridges.


The Fence or Cleated Separator.

If plain sections ever come into general use, it will greatly simplify the present method of cleaning propolis off the sections, because there are no insets or openings in the sections to clean; and as these openings cannot be cut quite so smooth as the rest of the section, they are apt to be covered more with propolis and stain than other parts of the section. Mr. Aspinwall makes use of a wooden cylinder covered with sand-paper. While this is revolving at a high rate of speed the edges of the sections are drawn across it, cleaning the wood at one sweep, and this makes it look as fresh, so Mr. Aspinwall says, and as nice as when it originally came from the factory. Mr. Golden, whose section-cleaner was illustrated on page 33, instead of using a sanded cylinder, makes use of a belt made of sand-paper. The section is laid against the face of this rapidly-traveling belt, and, presto! the whole face of the section is cleaned in the twinkling of an eye.


Dovetailed Super with Plain Section and Fence.

We understand that the Root people are figuring on a smaller and cheaper machine for sand-papering the surfaces of the sections after they are filled with honey, that can be used by the mass of bee-keepers.

GOLDEN'S PLAIN SECTION SUPER AND FENCE.

In Gleanings for Feb. 1, Mr. J. A. Golden gives full directions for making the fence or slat separator, which we reproduce, with the illustration on the first page, which Gleanings has kindly loaned to us. Here is what Mr. Golden says:

"I send a photo of my arrangement of super for the no-bee-space section, and how I manage to change my leveled-down-comb bee-space sections to the no-bee-space; also how I arrange the section-holder for the no-bee-space section with slatted separator.

"I want to say to all who want to try the no-bee-space sections and slatted separator that they will find this arrangement far the handiest and most accurate of any plan—at least that I can suggest.

"First, I make a mold to make the slatted separator in—see No. 1 in cut; it is made by tacking on a smooth true board some ribs lengthwise just where you want spaces between the slats and the width of the opening. Transversely in the board, grooves should be cut to receive the cross-cleats. The cut will show (of course, make this pattern accurate and true). Cut the old or new separator strips straight the width you desire, and the exact length of inside section-holder. Having the little cleats cut, and one chooses to tack them together, drop a cleat into each groove, then lay the slats in their proper spaces, placing another set of cleats on top over the under cleats; drive three tacks through each set of cleats, and lift separator out; clinch the small points, and your separator is complete.

"But if one prefers to glue them, it is but a child's play. Having cleats and slats and a pot of hot glue, swipe one side of the little cleats, and put them in the transverse grooves, glue side up, then lay the slats on the glued cleats, and on the slats over the cleats lay another set of cleats, and over all a smooth board, and press one or two minutes; take out the fence and stack up, and keep weighted down for a few hours. It takes Flody just two minutes to glue a one-fence separator.

"Number 2 is the section-holder. It is made solid by nailing the section-slats to two end-boards, just so that four sections will fit between neatly; then nail on one side a cleated board to correspond with cleated separator, and one loose cleated side-board, No. 4, completes the section-holder. The cut shows Flody filling a holder.

"Number 3 shows one of my bee-way supers, filled with the no-bee-space sections; and holder No. 5, showing how they are held in place. No. 4, a loose side-board, is slipt in, and wedges pusht down between the holder and side, and the body of the super holds them permanent, and clamps sections bee-glue tight.

"Number 6 shows three sections of honey with the projecting edges clipt off by a circular saw."

⁂

Answer to Questions on the "Golden" Method of Comb Honey Production.

BY J. A. GOLDEN.

On page 66, Mr. McNeal has given us quite an interesting article, and I am very glad to read his comments, yet it is a fact that bee-keepers are more given to theorizing upon the subject of apiculture, so it seems to me, than on any other industry. Theories not practiced figure nothing in apiculture.

But to answer Mr. McNeal's questions and intimations as to my method, I will say:

First, how do I keep pollen out of the supers during the five days? By placing the parent colony over the supers in which the queen and swarm have been hived on starters or full sheets of comb foundation (*not drawn comb*), and providing side-entrances so that when the field-bees come in loaded with pollen they go directly to the brood-combs and deposit their pollen.

Now, I don't know whether they (bees of the swarm), during the five days, return after depositing pollen and deposit their little mite of nectar below or not, but I do know that I have never seen, to the best of my knowledge, one cell of pollen in section honey produced by this method, and I have letters from quite a number of bee-keepers during the past season who claim the same success.

Now, I don't think it ought to be much of a wrinkle if one will properly test as recommended. That's the way I usually do with any manipulation that comes up, and in so doing many theoretical ideas I had trumpt up wither away. So I hope Mr. McNeal will fulfill his promises the coming season.

There is much in Mr. McNeal's article I would like to notice, but it would require too much space in this article. I will just say, however, that I use both 8 and 10 frame hives, and I think if he could see them during the season he would think they ought to be able to pile up the nectar.

Before closing, I want to say amen to C. B. Elliott's closing paragraphs on page 68. *It is a fact.* Who will be the next? Let's have them all. Continue that practice, Mr. Elliott, and I don't believe your bees will ever have paralysis or foul brood. Morgan Co., Ohio.

⁂

Questions on Extracted Honey Production.

BY C. P. DADANT.

I have received the following questions with the request that I reply to them in the American Bee Journal:

MR. C. P. DADANT:—In running for extracted honey do you use the narrow frames altogether? and do you use full sheets of foundation in such frames as you do use?

Do you extract during the honey-flow, or leave all on until the end of the season?

How do you care for the empty combs during the winter? and how are they cleaned after extracting?

Any additional information along these lines which you may be able to give will be highly appreciated. CHUCKLEHEAD.

In running for extracted honey, which has been our specialty for some 25 years, we use what is called a half-story frame, but the name is somewhat misleading, for these frames are more than an exact half story in depth. The end-bar is just six inches long, making the frame in the clear about 6¼ deep. The length of these frames is the same as of the frames below. With a deeper frame than this, which we tried on about a hundred hives, some ten years ago, and which we kept in use for a few years, we find that if the hive is not very populous, and the weather cool, it gives the bees too much room at one time, and, on the other hand, if the weather is warm and the crop not very heavy, the queen is more apt to go up into a deep frame to lay, especially as there is often more room than needed for the honey at one time. We therefore prefer a shallow frame and, if needed, we put on two supers or more on one hive.

The shallow super, just half the depth of the Langstroth frame, which is used by many is, in our opinion, too much to the other extreme. Its size is so small that with our large hives we would have to use several supers on the majority of the hives, and it increases the labor by giving too many frames to handle. The only advantage that we can see in this 4¼ super is its permitting the producing of either comb or extracted honey with the same outer shell. But the outlay of money on supers and hives nowadays is so insignificant when the results are taken into consideration that we would never advise any one to stint on this point. As well might a farmer buy a cradle instead of a harvester, as one of our bee-men buy an implement of inferior grade. The farmer who understands his business not only buys a harvester instead of a cradle, but he buys the best, even if it costs more, for he knows that time is money. With us, time and honey are both money. An extra super, with the frames, costs but a few cents, and if not in use may be put away with the combs in it. There need be no danger from the moth, even if the super and the combs are kept through the summer, provided they have been put away in a cold room (the honey-house is usually cold), and the room carefully guarded against the introduction of any suspected combs during the summer.

Here let me stray from my subject only long enough to recommend the use of a sun wax-extractor. When you have "chips" or broken combs during the summer, instead of putting them away in the honey-house waiting for enough to be gathered to melt up into beeswax, and thereby running the risk of introducing into that house moth-eggs or larvæ, it is a much safer and more agreeable method to put them right into the sun extractor, where, at the first warm rays of the sun, these combs are rendered into very good beeswax, and the parasites they may contain are killed.

Do we use the narrow frame altogether? Yes, by all means. We have no earthly use for either the Hoffman close-fitting frame or the Heddon frame. They may be good, and perhaps if we were used to them we would like them, but what little experience we have had with them does not recommend them, in our mind. We want the narrow, free-fitting frame both in hives and extracting-supers, and the name of "rattle-box" that has been given to these hives by some noted bee-keepers has no more effect on our opinion than the epithet of "useless toy" that was hurled at the honey-extractor by a so-called experienced European bee-keeper, when this useful machine was first invented.

If we expected to travel over the country with our bees, taking the hives along like so many trunks, we might like the close-fitting frames, as they would stand the racket best, but when we set a hive down in one spot we expect to leave it there, and when the frames are once placed in proper order, there is no fear of their "rattling about" before the bees glue them fast. When the extracting-combs are well built, we like to space them a little farther apart than the brood-combs, and in a super that is originally made for 11 frames, we usually put only 10, and if the combs get very thick, sometimes only 9.

We do not extract during the honey-flow, unless we have absolutely no room left, and there is a prospect of a continuation of the crop. To be sure, it is much pleasanter to take out the honey while there is still nectar in the field, as we are not annoyed by robber bees, but with a little care robbing is avoided, and the honey extracted after the crop, is usually best. Yet, we find very little objection to extracting the fall crop from knot-weed and Spanish-needle as fast as harvested, for this honey is usually pretty ripe when brought in by the bees. For some reason there is much less danger of fermentation in the fall honey than in any other, unless apple or grape juice has been added to it.

The combs are cleaned by the bees after extracting. We usually put the supers back on the hive in the evening just before sunset, so that the uproar caused by the daubed combs may subside without trouble.

We have already said in this article that we keep our supers in the honey-house when not in use. The only requirements in this cold climate to keep those combs safely for years are, to have them in well-closed boxes safe from the depredations of mice, and to let the temperature of the room fall, during the winter, to 10° Fahr., or less. We have never known such combs to be damaged by the moth, unless the latter was carelessly introduced in the room during the summer.

We use full sheets of worker-comb or foundation in our extracting supers. Our reason for doing this is to avoid the building of drone-comb in the frames, and the consequent occasional rearing of drones in the extracting-supers.

Hancock Co., Ill.

⁂

Wintering in a Barn—Packing Bees, Etc.

BY WM. H. EAGERTY.

I see that some are asking about wintering bees in a barn. I have thus wintered them, and tho they used up considerable honey they wintered very well. I placed the hives so that they were along the south wall of the building, and about six inches from the wall, with the hives about six inches apart. The space between the hives and the wall was packt with chaff and straw. I made a box for the hives to stand on, by taking 2x4's and nailing boards to both edges and also to the ends. The box made a dead-air space under the hives. I had the front of the hives face into the barn instead of outward, and the winter being cold I had no trouble from the bees in the way of coming out of the hives.

PACKING BEES PROPERLY FOR WINTER.

I see that a bee-keeper in Cedar county, Iowa, has fixt up his bees for winter by packing the super with straw, and also packing in straw between the hives, then putting on a cover of leaves and straw over the hives, and covering all with boards. It would be better to put the leaves in the super, and leave the straw for the outside packing. They should be oak leaves, as they are tough and leathery, and they should be gathered on a sunny afternoon, so that they might be both dry and warm when put into the super.

A very good covering for bee-hives on the summer stands is slough-hay or rye-straw tied in bundles and stood around the hives, all the bundles being tied together at the tops. This covering requires no lumber, the bundles standing straight enough to shed rain. If used in a windy country a little dirt can be thrown upon the butts of the bundles of hay or straw to hold them in place.

HOW BEES FLY TO AND FROM THE HIVES.

A late correspondent speaks of the flight of the honey-bee, and of the bee-line. My apiary is located on a gentle swell of land near a creek bottom, and just high enough to give me a good view of my bees as they come and go when at work during the busy season of the year. From what I have seen I am led to believe that the bee flies in a very straight line from one object to another, but those objects are not so far apart as some might be led to believe. I have seen the bees, when coming home with their loads, nearly all make for a tall apple-tree, and from there to the hives. Having found their line, I have gone along it to see how they operated further along the line, with the result as above stated.

My best chance to see the flight was when the bees were going from the hive to the fields to get their loads, and I saw that they moved a little sidewise with each stroke of the large wings, going first to one side than to the other, something as a skater moves when skating on the ice, going first with one foot than with the other, but keeping a true line in the main. A single bee seemed to fly as if in a tube with a diameter of about 1½ inches, moving not only sidewise but also up and down, to something like the same extent, and, like the skater, they seem to gather more force with each side movement.

I stay in the bee-yard about all the time from early spring until late in the fall, and I watch the insects quite closely. In this country changes of the weather are quite frequent and very sudden, and it is fun to watch the bees when they come home to escape a summer shower. The showers are driven before a strong wind, and they make the bees "hustle their boots" to reach the hive in time to escape a wetting.

Republic Co., Kans.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all others possible to subscribe for it. See offers on page 91.

CONVENTION PROCEEDINGS

Report of the Northwestern Bee-Keepers' Convention, Held in Chicago, Nov. 10 and 11, 1897.

REPORTED BY A SPECIAL BEE JOURNAL REPORTER.

(Continued from page 102.)

FIRST DAY—EVENING SESSION.

CLIPPING WINGS OF VIRGIN QUEENS.

"Is it advisable to clip the wings of virgin queens?"

Mr. Wheeler—I have bad it tried on one virgin queen, and know of the wings of another being clipt; results not favorable.

Mr. Baldridge—Mr. Aspinwall, of Michigan, is in the habit of clipping the wings of virgin queens an eighth of an inch, or about a sixteenth, so they well not fly very far from home for the purpose of mating, and he has succeeded in getting them mated in a way that he would not have otherwise done.

Dr. Besse—I askt that question. I also recollect reading that Mr. Aspinwall recommended clipping. I should like to keep my queens pure. I should advise some of these young men to experiment in it. I believe in clipping old queen's wings to keep them from going very far when they swarm.

Pres. Miller—I do consider it as a thing we need to watch very closely. As has been said, an eighth of an inch has been reported as having been taken off; this was reported as an exceptional case, but it resulted favorably, and Mr. Aspinwall reports that the number of mismated queens with the wings clipt is not more than one-third of those that were left unclipt, so that those who have pure stock of their own and want to refrain from mixing them with other stock, will probably find a very great advantage in practicing that very thing.

Mr. Baxter—That will do for those who produce comb honey, but not extracted, for there is no trouble, and you ought not to be bothered with any swarming at all.

Pres. Miller—That does not have any reference to swarming, because you will have to have your queens whether they swarm or not; your queens will be replaced perhaps once in three or four years anyhow. Of course, there will be some trouble, but you have to attend to it if you consider the matter of controlling fertilization of sufficient importance for you to take the trouble.

Mr. Baxter—Some one said that he clipt the old queen's wings to prevent her from flying very far when the bees swarmed.

Pres. Miller—That is another question altogether; this is with reference to clipping *virgin* queens.

Mr. Wheeler—Would that be practical with you when you were producing your honey? Could you practice anything of that kind.

Pres. Miller—I will answer that for myself, that it would be quite a little trouble for me, but if it made enough difference in the result I would do it, because every one of my queens I know about, and see the virgin queens before they are laying; there will be trouble, of course; the only question is, will it pay for the trouble?

IN-BREEDING FOR TEN GENERATIONS.

"Supposing a pure Italian queen is mated with a pure black drone, and in-breeding practiced for 10 generations, what will the stock be?"

Pres. Miller—Will it be Italian stock, or black stock, or what will it be?

Mr. Green—I suppose the one who askt the question referred to the belief that some hold and have advocated that such bees would incline toward yellow stock, and in time become yellow bees; but in my experience I should say not. I should think they would remain hybrids. They might be very dark yellow, possibly; they would be more even than the first cross.

Pres. Miller—The question is not as to the appearance of bees, but as to the amount of Italian blood in the stock.

Mr. Green—There should not be any change.

Dr. Besse—It would be impossible to have them mated that way with the amount of Italian-blacks in the country now.

Pres. Miller—This is a fair question to ask. You know this, that in some cases crosses are considered valuable; there are some who think very highly of crosses, and some who want pure-blood Italian-blacks. Now the question is, What will your stock be? In that case, what proportion of Italian blood and black blood will you have?

Mr. Schaper—If the drone from the Italian queen fertilizes the next generation, I should think it would cause the third generation to be three-fourths Italian; of course, in breeding you should consider that the drone from the same colony would fertilize the young queen that would be reared from the parent colony. Would that not have a tendency to produce three-fourths blood?

Pres. Miller—It would.

Mr. Schaper—And would remain the same, three-fourths blood all the way through; the third year the drone progeny would not be Italian, it would be three-fourths, so would be the queen.

Mr. Green—It might work either way.

Mr. Kartch—It seems to me the first cross will produce half-breeds, of course, and if you follow up mating with black drones, you will have the queens blacker all the time, and by the time 10 years expire you will have a perfect black bee; you have very little Italian left at the end of 10 years.

Mr. Schaper—By having the first queen full-blood Italian, and mated with a black drone, the next year if the swarm issued and the young queens reared, the queen will be half blood, the drone will, as is generally supposed, be full-blood from that colony, consequently the third generation will be three-fourths, and if they are inbred from the same colony for 10 years, they will remain about the same as they were the third generation.

Pres. Miller—If they keep changing from the first, second and third, why do they stop at the third? Why not change at the fourth?

Mr. Schaper—Because there is no change of stock or blood, it is the same blood.

Mr. Baxter—The third generation the drone will be ½ and the queen ¾, and it will finally become perfectly black.

Pres. Miller—I will risk my reputation on figures and give you my answer to it: When you get to the fifth generation you will practically have ⅔ Italian stock; you can continue at that, and you will be constantly approaching and never quite reaching ⅔; that is what your stock will be, ⅔ Italian blood; it will be ⅔ stock as nearly as you can get to it. The first generation you have a pure Italian queen; you start with that pure queen; the next generation your first cross is half blood, isn't it? Now we have gone from one right down to ¼; what will your next queen be? ¾; pure Italian queen, pure black drone, result, the progeny is half-blood queen Italian, and the pure Italian drone; now with that half-blood queen Italian and a pure drone, you will have a ¾ queen; now your stock rises that time, and it will be between ¾ and ½; it will be ⅝ Italian; it was first ½ Italian, then ¾ Italian, then ⅝; next time 11/16, and so it will keep going up and down each time getting nearer and nearer to ⅔, and if you keep on to infinity you will get ⅔ stock.

Mr. Wheeler—It is quite an important question to me right there. What do you think would be the color of those bees after 10 generations, after that process?

Dr. Besse—I don't think they would have more than one ring around them, anyhow!

Pres. Miller—From my experience I should expect two bands.

Mr. Wheeler—My experience is they would go back to black blood in color. I have most of the bees in my part of the country, and I declare it is almost impossible to keep their color. I buy queens and keep selecting all the time, and my stock runs back.

Pres. Miller—Just upon this line I have had a good deal of experience. For years and years the tendency seemed to be that there was no holding toward the yellow blood at all, and almost every year I would get imported queens from Italy, and it seemed black stock was all I could have. Of late years, it seems to be working the other way, and I account for it in this way: In the first place there was black stock all around me, and my stock was continuously mixing with that stock, but gradually hybrids were about me, more or less pure stock, and that has made a change in that direction. There is another thing that comes in to make me think the tendency is no more to black than yellow, if as much. What is the tendency to change when Italians are brought into this country? What have you found, when you have reared queens? Have you had lighter or darker queens? If your experience has been the same as mine, you will get lighter queens than pure-stock Italian. You know, further, that we have had what they don't have in Italy—we have the 5-banded stock, the pure yellow all over. I am inclined to think there is more or less a tendency towards a lighter color. That is not disputing Mr. Wheeler's statement, that the tendency of his bees was towards black stock; that was my experience, but I think it was because of the mixing of surrounding bees. I do not think, if you had the same stock all around you, there would be a tendency towards dark, but rather lighter.

Mr. Baxter—In my neighborhood I don't know of any one else who has any bees now within four or five miles of my place, but I have got to keep changing every year, so as to get Italians.

FINDING DARK QUEENS.

Mr. Norris—I am comparatively a novice in the bee-business; my efforts have been hindered a good deal about being able to find queens, particularly dark queens.

Pres. Miller—That is a very proper question to ask. How do you find queens, especially dark ones? Tell us, Mr. Norris, if you please, something about the condition of affairs when you want to find the queen.

Mr. Norris—I can tell my method of looking for them. I smoke them as long as I reasonably can, and use an extra brood-chamber to set out the combs carefully, and look them over carefully as I take them out and put them in, and find it difficult to find queens.

Mr. Baldridge—I think I should put a cover on the hive about two inches deep, something similar to the Simplicity cover, and as you blow the smoke at the entrance, rap on the hive. I find that the queens are generally in the cover, and in a very few moments, without taking the comb out of the hive, I find them frequently on the cover. It is a very easy matter to rap on the hive, ond if you take that cover off at the proper time, you will find, almost invariably, the queen in the cover.

Dr. Besse—Black queens are very shy; they don't stay on the hives; they will slip around and hide in the corners; my experience is when I want to find them, the same as Mr. Baldridge's—drum them out, and if you can't see them then, shake them on the alighting-board in front of the hive; then take out one frame and shake them on, and the next one, and so on; they are a trouble to find, sometimes.

Mr. Norris—Once I was bound I would find the queen, so I shook the bees out of the frames on a large sheet of paper in front of the hives. I got all the bees out and watcht them carefully as they went in, and could not find any queen until they were nearly all in, and about made up my mind there was no queen. I then raised up the paper, and the only bee under it was the queen!

Mr. Green—I once had to find queens in a large lot of hives in which the combs were hard to handle, and the queens very shy. A great many of them were dark bees. I found that when rapping on the hive and smoking I could find them in that way much quicker than any other. I could almost always find the queen that way within five minutes. In my work in the apiary in finding queens I generally use the plan of shaking the queen out. To make operations easier I have a large alighting-board made of perforated zinc, and shake the bees on that.

Mr. Wheeler—In using Mr. Baldridge's plan, I wish to mention that you should lift the cover carefully, and not take it off with a snap; the queen is likely to knock down if the cover is taken off with a snap or jar.

USING BAIT SECTIONS.

"How many think it necessary to put bait sections in the super?

Pres. Miller—I think you can have two questions of this. Suppose I say I can get work done without any bait sections at all, but on the whole I think it is better to have them. It would be advisable in that case but not necessary. Let us take the question as it is given. How many think it necessary to put bait sections in the super? [Six.]

How many think it unnecessary? [Five.]

How many think it advisable to put bait sections in the super? [Twelve.]

Mr. Wheeler—There is an "if." It depends entirely upon the kind of hive you use, and what you are doing. If I use a Heddon hive and queen-excluder I don't want any bait sections. My queen is quite apt to come up and lay in bait sections. If I use a Langstroth hive then I want to use bait sections.

Dr. Besse—Have a ¼ inch space between the supers and the upper side of the frames; there is no danger of the queen getting up; that is my experience.

Mr. Norris—It depends more upon the honey-flow, if they are necessary, than on any other one thing. If there is a large flow, you don't need any baits.

Mr. Baxter—I don't think it is necessary. If the bees are going to work at all, they will work sometime—if not this year, next.

The convention then adjourned until 9:30 a.m. the next day.

[To be continued.]

Report of the Illinois State Convention.

BY JAS. A. STONE.

The Illinois State Bee-Keepers' Association met in Springfield, Nov. 18, 1897, for a two days' session, and was called to order at 10:30 a.m. by 1st Vice-Pres. J. Q. Smith. The minutes of the last annual meeting were read and approved.

The committee on State Fair reported, and recommended that, tho their work had met with general approval, still some changes were needed in the premium list, as well as in the code of rules. The committee reported that the State Board of Agriculture gave us a good liberal premium list, and some of the members of our Association did very well in trying to make a creditable display.

Since the State Board, and especially Supt. Cater, have done so well by bee-keepers, in offering so liberal a premium list, it should be the object of bee-keepers everywhere to see that a grand display is made—one that will not only be gratifying to the State Board of Agriculture, but a credit to the bee-industry of the State and of the whole country. Not only did they deal liberally with us in our premium list, but Secretary Garrard kindly gave us our score cards in such a good shape that if there was anything wanting it was our own fault. Then Mr. Cater selected a good judge in Mr. George W. York, of the American Bee Journal, and everything was past upon in such a way that no right-minded person had any room for complaint. If the State Board, and Supt. Cater, are as liberal with us in the future as at the last Fair, we recommend that the members of our Association especially guard with zealous care to see that the exhibit is such that no premium be carried off which shall not have well deserved the same. If we make a fine showing we can expect good premiums, and if our showing is inferior we will be only treated right in getting small premiums.

The report was approved, and discussions followed, as to what changes ought to be made in the premium list, and, finally on a motion by Mr. Black, it was left to be settled by the new committee on State Fair, which was named as follows: Jas. A. Stone, chairman, Chas. Becker and S. N. Black. It was the decision of the meeting that in recommending a premium list for Illinois bee-keepers only, that they should not be compelled to be the producers, but that they ought to be apiarists, and their honey the product of this State.

Mr. Robbins thought that in the exhibit open to the world the amount of comb honey ought to be limited to 250 or 300 pounds.

Mr. Becker thought it was only those who went the rounds of the fairs, who demanded such a change, and it was a question whether they were a benefit to the State Fair, or to the cause of bee-keepers. The subject was well considered, and argued on both sides, but seemed to be the prevailing opinion that any changes to be made in the premium list should be made to favor those who are showing in the interests of the cause, rather than those who are making the rounds of the fairs.

AFTERNOON SESSION.

The first on the program taken up was the question-box.

GETTING BEES OUT OF COMB HONEY SUPERS.

How can we with the least trouble get the bees out of our comb honey?

Pres. Smith—I put about six section-cases into a tight box with small strips of wood between the cases so the bees can pass between, and have holes in the box, covered on the outside with cones of wire screen for the bees to pass out.

Sec. Stone—For several years I have used only the Porter bee-escape, and find it takes great care to see that no spaces are left anywhere, or the bees will get back as fast as they go out.

COMMON FARMERS KEEPING BEES.

Mr. Becker askt, "Should bee-keepers encourage the common farmer to keep bees?"

Pres. Smith thought not; that every extra-good year brought everybody into bee-keeping, and as the years grew bad they all went out of the business, with no good result to any one. Others thought about the same.

Mr. Black—It is no profit to themselves and an injury to bee-keepers.

On motion of the Secretary, Messrs. Black, Smith, and Poindexter were appointed a committee to interview the Governor and present the following petition :

WHEREAS, The Northwestern Bee-Keepers' Association, at their annual meeting held in Chicago, Nov. 10 and 11, askt that the Illinois State Bee-Keepers' Association at its next (this) session take proper steps to secure help from the State, to make a creditable exhibit of honey, beeswax, etc., at the Trans-Mississippi International Exposition ; therefore, the Illinois State Bee-Keepers' Association in session have appointed a committee consisting of S. N. Black, J. Q. Smith, and Geo. Poindexter, to wait on the Governor, as to his pleasure, and ask, if it be consistent with his will, and for the good of the State of Illinois, that one of the commissioners to have the care of the appropriation from this State to the above-named Exposition, be a bee-keeper, or a man who will favor a good display of the apiarian products of the State of Illinois at the Omaha Exposition ; and, also, ask his Excellency, the Governor, to favor our request if he consider the same proper.

COMB OR EXTRACTED HONEY—WHICH ?

" What are the best results for which to work—comb or extracted honey, or both ?

Mr. Black—I think there is more money in extracted, take it year after year. I don't like to use sections the second time. In producing extracted honey we do not have to use so many fixtures, tho I favor working for both. Extracted is always ready for the market, while comb has to be " just so " or there is no sale for it. I think comb honey is the healthier.

Mr. Poindexter would work for half of each. We ought to have some comb honey always on hand.

Mr. Smith—It pays to work for both. I expect to do so in the future, and sell both at the same price—12½ cents. I put my extracted into stone jars, and tie it up with muslin cloth.

Mr. Black would heat the extracted honey while extracting in wet seasons.

DRONES FROM LAYING WORKERS.

" Are drones from laying workers potent to fertilize queens ?"

Mr. Black—I have never seen anything that would settle this question in my mind.

All had something to say on this question, but no one could give any light on it.

The Secretary announced that arrangements had been made with the American Bee Journal, the same as last year—one dollar for membership in the Association also giving credit for one year for the American Bee Journal, from any date desired.

The election of officers for the ensuing year resulted as follows :

President, J. Q. Smith, of Lincoln ; Vice-Presidents—1st, C. P. Dadant ; 2nd, A. N. Draper ; 3rd, S. N. Black ; 4th, Geo. Poindexter ; and 5th, George W. York. Treasurer, Chas. Becker ; Secretary, Jas. A. Stone, of Bradfordton.

INCREASING THE DEMAND FOR HONEY.

" How can bee-keepers increase the demand for honey ?"

Mr. Black—If you can't sell it, give it away. Keep your trade by buying, to sell them (your customers) when you have none of your own production.

Mr. Smith—Leave a case and tell them you will call again for it if they find they do not want it after investigation Don't come down on the price in order to sell it.

Sec. Stone—Let people know you have honey, by giving them a chance in some way to see it. I never have any trouble in selling all the honey I can produce, and a good deal more.

SWARMING AND WINTERING.

" Will bees swarm sooner when wintered in the cellar than on the summer stands ?"

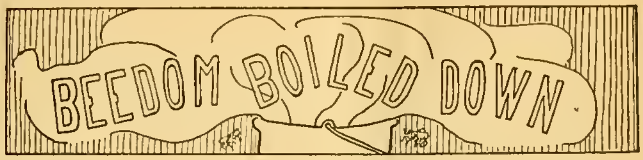
Mr. Black—It depends upon the winter.

Sec. Stone—If the winter is severe and the spring late, I believe the bees kept in the cellar will come out away ahead in their brood, and it follows they will first be ready for work, and consequently swarm earlier.

Other questions were handed in that for lack of time were not answered, and we will send them to Editor York to be put to his question answerer, in the American Bee Journal, for the querists to watch for. JAS. A. STONE, *Sec.*

* * *

☞ See " Bee-Keeper's Guide " offer on page 125.


BEEDOM BOILED DOWN.

Plain Sections.—"The past season I used the no-bee-way sections with barred separators, and learned that better comb honey, and more of it, can be produced with them, and it can be cleaned of propolis and packt in half the time that slotted sections can.—E. A. Morgan, in Southland Queen.

* * *

A Lubricant for foundation machines given by Alois Alfonsus, in Bienen-Vater, is nine parts skim-milk and one part alcohol. He says it works well, and it has nothing objectionable in it. Another writer in Rhein-Bztg. says one part alcohol and three parts of the watery portion left when cheese is made of skim-milk.

* * *

Chilled Bees.—Gravenhorst says in Deutsche Illustrierte Bztg. that chilled bees found on the hives or bee-house after a cleansing flight, may be warmed and returned to other colonies as they have become chilled, because some change in appearance has hindered their prompt return to their own hives; but those found on the ground in front of the hives are not worth minding, for altho they may be revived they are death-candidates, and will not last long.

* * *

Tall Sections 14 Years Ago.—The editor of Busy Bee says, when he went to Missouri, 14 years ago, the Crown hive was the principal one in use, with which tall sections were used, having no bee-space in them, the bee-space being in the separator. The arrangement was good, the sections when filled very attractive, and not hard to clean. But the hive was too expensive, and so went out of use. But he thinks, for the average bee-keeper, the ordinary 4¼ section is best.

* * *

A Dishonest Lot, is what Aaron Snyder considers bee-keepers who produce comb honey and crate and market the same. If there are any exceptions he does'nt take the trouble to mention it. The special charge is "facing" a shipping-case with nice sections, and the middle of the case filled up with inferior quality. The editor of Gleanings thinks Mr. Snyder seems a little severe in his arraignment. But, really, ought a man to call all comb-honey men snide when he himself is Snyder ?

* * *

Carbonyle has been recommended in foreign journals as a preservative of hives, for some time. In L'Apiculteur, A. Bassaler reports that in March he put under part of his hives floor-boards painted, five or six months previously, with carbonyle. April 20, on examination, he was stupefied to find 60 out of his 89 colonies gone up. Plenty honey left, but not a bee live or dead. And the 60 colonies were just the ones that had been placed over the carbonyle, the remaining 29 having their old floors.

* * *

Creolin for Foul Brood.—Henry Otto, having seen creolin recommended in a German paper as a remedy for foul brood, gave it a trial. He sprayed the bees at the entrance of the hive, commencing the last of October, taking the warmest time of the day, repeating the spraying five or six times for two or three days. Also used an atomizer to spray the frames and inside of hive. The next spring the bees were healthy, and he has had little trouble ever since by applying the remedy on each appearance of the disease.—Pacific Bee Journal.

* * *

Handling Plain Sections has been mentioned as a rather ticklish affair on account of the danger of sticking the fingers into comb so near the edge of the wood. In Review, J. E. Crane says his experience has been that they require more careful handling than others, or they will be marred and set to leaking, especially when put in paper cartons. T. F. Bingham says, "The very thought of such a section is a thought of danger," but from what he says it appears to be with him only a matter of thought without experience, while Mr. Crane speaks from actual experience. Editor Hutchinson, speaking also from experience, thinks the danger has been overdrawn. He had three cases of such sections filled with honey, and at five fairs they were opened, the sections taken out, pulled about and handled and exhibited and then put back, and not a scratch made on the combs.

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EDITORIAL COMMENTS

California Bee-Keepers' Exchange.—The Los Angeles Fruit World for Jan. 15, reported that C. H. Clayton, secretary and business manager of the Exchange, on Jan. 14 sold three carloads of amber extracted honey at 4 cents per pound, for shipment to Chicago and Boston. An offer of the same price was declined for 36,000 pounds of amber honey later in the day. It was said in the same paper that the market was firm, demand plentiful, and supply somewhat scant.

It is no doubt that the Exchange, when properly working, and supported as it should be by the bee-keepers of California, will prove of great advantage to all concerned.

◆

A German Sees American Bee-Keeping.—In Luxemburgischen Bienenzeitung an account is given of observations in America, in which especially the differences between Germany and America are noticed. In America no bee-houses as in Germany, but each hive out in the open air. All movable combs instead of box or straw hives. Frames lifted out above instead of at the back, so any frame can be lifted out separately instead of taking out all the frames to get at the last. One cannot help wondering, however, in what part of America he has been traveling to make the statement that bee-keeping is to be found in America at every farm-house, that the farmer living 20 to 30 miles from the nearest town must depend on the bees for his sweetening; that in America almost all fruit that is boiled down is boiled down in honey; and that farmers come and offer honey at 4 to 5 cents a pound, and often not being taken at that, they finally offer it at 2 or 3 cents to get rid of it!

◆

New Things are being constantly brought out in all lines of the world's work. Bee-keeping is no exception. In this number we illustrate and describe two of the new apiarian things—the plain section and slat separator, or fence. Now it would be very foolish for bee-keepers to at once throw away all the fixtures they have on hand, and get a big supply of the new. There would be neither sense nor reason in so doing. The proper thing to do is to get some of the new goods for trial, and then if you find them superior to what you have been using, adopt them; if found no better, then you can go on with the former things.

We believe in showing to our readers every new and useful invention that may be brought out in the line of bee-culture, but we hope that no one will conclude that because we do this, we at the same time advise them to throw away or burn up all the old things now in use. No, no; test the new, and then "hold fast to that which is good."

◆

A Few Kicks and Growls.—Mr. J. M. Jenkins, of Elmore Co., Ala., "kicks and growls" in the following (perhaps latest) fashion:

I've got a little kick or two on my mind for the American Bee Journal, and here goes. Of course, the people that don't run papers and railroads know all about how they *ought* to be run.

1. I don't like that new-fangled way you have of spelling. Can't get used to it. Get to reading an interesting advertisement, editorial or communication, and all at once meet one of those things face to face, and it surprises me—actually, some of 'em "shox" me. (That's a good 'un—shox.) Then I rather lose the subject and catch myself looking ahead to see what next. May be silly, but it's so. I wish you'd quit it, but you needn't stop my subscription, even if you don't.

2. Speaking of advertisements, I wonder how many folks, on receiving a bee-paper or magazine, begin at the back, look over the advertisements from back to front first thing. I always do. I may, for want of time, leave some things unread, but not the pages of business propositions.

3. Another thing, I like to see the full name and post-office of contributors. Why not? Of course, everybody knows I am in the city where the State Penitentiary is, and where I am liable to spend the rest of my natural life, but how many of your readers, do you suppose, know where such little side-lights as Dr. C. C. Miller or G. M. Doolittle live and vote, and have their bees? I am sure the next number of the American Bee Journal will conform to these preferences o'mine—but don't stop my paper.

4. I also growl about the way in which you and Gleanings, and perhaps other bee-papers and correspondents, sometimes hint at or tell on dishonest commission-men. If a commission-man does a crooked piece of business, and it is publisht without giving his name, what good is done the unsophisticated country sucker that buys your paper, and also swallows the plausible buncombe and flattering testimonials of Wheadon, Horrie, *et. al.*, except to make him suspicious of *all* commission-men? What's the use of putting us onto 'em after the police have chased 'em out of town and closed up their business?

5. Expose swindlers by all means; but please tell us who they are. You wrong no one by publishing the facts about a transaction, with names and addresses of parties concerned. You can still further help bee-keepers, and, incidentally, the commission-men, by the favorable mention of a commission house that you know is honest and reliable, and deserving of patronage.

That's all. I wish you a happy, prosperous New Year.
Elmore Co., Ala., Jan. 14. J. M. JENKINS.

We will try to reply to some of Mr. Jenkins' questions and objections, tho our answers may not be satisfactory to him and a few others like him (who are outside of the penitentiary, and yet so near to it!):

1. Many people don't like "new-fangled" things and ways, but all of the old ideas and things that have contributed to progress in any line were once thought by some to be "new

fangled." *We* believe in progress, hence we are trying to help it on a little by uniting with some 300 other publishers, editors, etc., to simplify and shorten our way of spelling the English language by taking a certain class of words first. "Shipt" certainly is simpler than "shipped." "Shox" is your own idea, not ours, Mr. Jenkins. But we prefer it to "shocks," tho "shoks" would be better, and we hope the day may come when it will be in good form to so use it. Two or three of our subscribers stopt their subscriptions because we were trying to help on what we considered a good thing in the way of an improved spelling. But the Bee Journal was not entirely dependent upon such unprogressive folks, so it has just kept right on in its weekly appearance, and likely will continue to do so. We may not be very large in size ourselves, but we are not easily frightened, particularly when we know we are on the right track.

2. This is a matter wherein our readers may do exactly as they please. We would have no objections if they, like the old colored brother, should prefer to read the Bee Journal bottomside up, "so as to get the bottom facts first!"

3. Here is a thing that seems to bother one or two others besides Mr. Jenkins. But when you subscribe for *any* paper, it is no part of the contract that you shall have the post-office address of *any* of its correspondents. We agree to furnish you a first-class paper for a year. Our contract is confined to the paper. It doesn't go outside. Hundreds seek free advertising in this way, and if we give one address we are bound, in some degree, to give all. We are constantly annoyed by this class of correspondents. We save no manuscripts, and a week following we may not remember the address of any particular correspondent. Our mailing list is arranged by post-offices, not names of individuals. If one asks for the post-office of a particular correspondent, we often can't give it unless it happens to be one we know, and we can't find it on the list without going through the whole of it—like looking for a needle in a haystack. The proper way for a publisher is to give the county and State; that gives the location of the writer, and beyond that no subscriber has any legal demands. If any one has any advertising to do in our paper, to make any money out of it, he must pay for it. It would be wrong for us to charge one man regular rates and admit another man's advertisement free—and in the best and most expensive locations, in pure reading matter. No man wants his post-office address publisht unless he has some object in view that has no connection with the paper. All proper inquiries can be made through the columns of the Bee Journal, and all replies of general interest, also. By giving the county and State, we give all that any reader has any right to demand; by suppressing the post-office we save writers, who have no advertising in view, an endless amount of trouble and annoyance, and checkmate the free-advertising fiend. One of our correspondents once received 50 letters in reply to an article he wrote for the Bee Journal, and he hadn't paid one cent for advertising! Right is right. We believe in justice to all, hence we *stopt* the free-advertising business for one person and charging another man for the same thing. We don't propose to give one person any advantage over another in the columns of the Bee Journal, however others may do.

4. Experienced publishers, and honorable ones, too, have some respect for libel laws, as well as for other good laws. We *cannot* publish all that we would, some times.

5. By consulting the advertising columns you will find the names and addresses of commission-men and other dealers who are regarded as "honest and reliable," else they wouldn't be found there. It will hardly do to boom commission-men in a miscellaneous or particular fashion, for you can't tell how soon some of them may be found doing a crooked business. Of course, just as soon as we discover such we drop them, as we have done in several instances the past few years.

Now, we want to say that we are glad Mr. Jenkins sent in his "kicks and growls," for it has given us a chance to 'give a reason for the faith that is in us." We want all our 'readers to know just *why* we do such and such things, so that they may see that it is not because we wish to be whimsical, or to annoy or "discomfuddle" them, but to simply carry out our idea of doing or showing justice to all and impartiality to none. We want to be and do right, but do our best we cannot hope to please all. In fact, you wouldn't read a paper three months that was edited by a man who tried to please all, and had no backbone, or mind of his own. We are simply trying to make the old American Bee Journal as nearly as we know how, just what it ought to be. We sometimes fondly hope that we are succeeding. Then again, like Dr. Miller, we "don't know" about it.

THE WEEKLY BUDGET

Rev. A. B. Mettler, of Will Co., Ill., called on us when in Chicago, Feb. 16. Mr. Mettler is a bee-keeper of three years' experience, and is making a success of it. He finds that preaching and bee-keeping go well together.

Simpson Honey-Plant Seed, or Figwort, we have been out of for a long time. As we are not able to fill any more orders for it at present, we trust no more requests will be sent in for it until we again announce that we have a supply of the seed. Just now we do not expect to have any more.

Mr. Chas. A. Holmes, of Suffolk Co., Mass., makes an exclusive business of furnishing strong colonies of bees for use in greenhouses, preferring that those who may need them should give their orders the fall previous. No doubt the greenhouse people will be after Mr. Holmes, when they once learn that he is ready to supply them with the busy bees. They are put into the greenhouses on or about March 10, to work on cucumber blossoms.

Mr. Jas. A. Stone, of Sangamon Co., Ill., Secretary of the Illinois State Bee-Keepers' Association, reports Feb. 9, that his bees were wintering nicely—so quiet that they could hardly be heard. Mr. Stone also sent us the report of the late convention at Springfield, which will be found in this number. Referring to it, Mr. S. says: "It is not long; but if any wanted to hear more of it, tell them they ought to have attended the meeting."

Catalogs for 1898 are on our desk from the following who patronize our advertising columns:

John Nebel & Son, High Hill, Mo.—Bee-Keepers' Supplies.
Page Woven Wire Fence Co., Adrian, Mich.—Wire Fences.
F. A. Crowell, Granger, Minn.—Bees and Queens.
F. Danzenbaker, Washington, D. C.—Danzenbaker Hive.
John Bauscher, Jr., Freeport, Ill.—Poultry.
Geo. H. Stahl, Quincy, Ill.—Incubators.
Geo. W. Hufstedler, Beeville, Tex.—Bees and Queens.
August Weiss, Hortonville, Wis.—Bee-Keepers' Supplies.
E. Kretchmer, Red Oak, Iowa—Bee-Keepers' Supplies.

Mr. A. W. Hart, of Stephenson Co., Ill., judging from the following, is almost glad we made a few errors in his first communication, as the correction seems to have afforded some fun:

"Editor Bee Journal:—Permit me to say thanks for the frank correction on page 73. I hardly knew which to admire most, the hearty correction or the happy play on the words. When my humorous bee-friend, the ex-secretary, remarkt on the 'errors,' he said:

'The editor knows Joliet [with its penitentiary] is in Will county, and he probably thought you were there—or ought to be; and you can't send any more articles as long as you are there, and may be that is what the editor means.'

"He thought he had a good joke on me, and we had a good laugh."

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Wire-Screen Comb Foundation.

Could one successfully use window-screen wire, and cover the mesh with hot wax for brood-frame foundation? NEW YORK.

ANSWER.—If you put the wax on so as to cover the wire-cloth entirely, the bees will probably use it, but it will take a good deal of wax, and would fail of being satisfactory in the most important respect, for the bees would make just as much drone-comb as without anything. Don't try it with more than one frame to begin with.

Swarms Clustering Together.

Should two or more swarms having clipt queens cluster together, would they each return to their respective hives? or would they go to some hive together, if left to their choice?

HOT SPUR.

ANSWER.—I don't like to answer, for the very first time you have two swarms of that kind left to their own sweet will, they'll be just about sure to do some other way than the way I say. Perhaps in the majority of cases, each swarm will go back to its own hive. That's on the supposition that each one clusters independently, or goes back to its own hive without clustering. They may cluster together and then each one go back to its own hive. They may cluster together and the united cluster go to one of the hives. They may go together or separately to some other hive from which a swarm had lately issued, and where a lot of returning bees are making a loud call. They may break all up and go all sorts of ways. You see I put in that "all sorts of ways" to cover some new way that your bees will invent.

Loss in Weight in Wintering.

I have 25 colonies of bees. I weighed them Sept. 27, 1897, and part of them again Jan. 8, 1898, and I would like very much to know where part of the weight has gone. Below I give the weights of two lots in pounds—weight given being of the bees and combs:

	Sept. 27th.	Jan. 8th.	Loss.
No. 2	5¾	47½	6¼
No. 3	55¾	49	6¾
No. 7	26½	20½	6
No. 17	37	30½	6½
No. 19	34½	27	7½

Total loss, 33 Average loss, 6 3-5

This lot had *all* natural stores. In the following lot the figures in the third column represent the amount of syrup fed during two weeks in October:

	Wt. Sept. 27.	Amt. Fed.	Wt. Jan. 8.	Loss.
No. 4	12	17¾	12¼	17½
No. 8	18	12	16	14
No. 13	12	20	7½	24½
No. 16	24	8	20½	11½
No. 20	15¾	15	18¼	12½
No. 21	23	7½	25½	5
No. 22	16½	15	21	10½
No. 23	22	8	16¼	13¾
No. 24	24	6	19¼	10¾
No. 25	24	7	21¼	9¾

Total loss, 129¾ Av. loss, 13

The syrup fed was made by stirring granulated sugar in boiling water, equal parts of each by weight, and adding three pounds of honey to each gallon. Each colony was given the full allowance at one time in a Miller feeder, late in the evening.

They are all on the summer stands, with a cushion filled with oats four inches thick on top. Part of those fed are contracted to five frames. They are in Simplicity and Danzenbaker hives. Can you give any reason why those fed have lost nearly twice as much as those not fed?

I watcht pretty closely, and do not think there was much robbing done. They are all strong in bees, as I took 13 colonies out of a neighbor's box-hives (he was going to brimstone them) in September, and gave plenty of bees to all that were at all weak.

IOWA.

ANSWER.—Your problem is a very interesting one, and you are entitled to no little credit for taking such accurate observations. I am not sure how much satisfaction I can give by way of an answer. Suppose we consider the case of No. 13—the one to which most was fed, and the one that suffered the largest loss, apparently disproportionately large. It lost about 18 pounds more than those that were fed. The supposition is that the bees evaporated the syrup till it was as thick as honey. The amount of water in honey varies very much, some honey having only about 12 per cent. of water, while other samples contain as much as 25 per cent. It is likely the syrup was reduced till it contained 18 or 20 per cent. of water, say 20 per cent. That would make 1-5 of the syrup when evaporated, water, or ¼ as much water as sugar. The 20 pounds of feed you gave contained eight pounds of sugar, eight pounds of water and four pounds of honey. That eight pounds of sugar would only need two pounds of water, six of the eight pounds being evaporated. That 6 pounds taken from the 18 pounds of extra loss leaves 12 pounds unaccounted for. I can only hint at some of the ways in which it may have gone. Extra labor was done by the bees in storing and evaporating the syrup, calling for an expenditure of force with a corresponding loss in weight. It is quite possible that feeding so much thin syrup may have excited a good deal more brood-rearing than took place in the colonies not fed, and this would make considerable loss in weight. And it is also possible that some wax was secreted, causing a large loss in weight compared with the weight of the wax. You have only confirmed what many others have noted, that in feeding bees there is always an apparently large loss not easily accounted for in exact figures.

Keeping Bees on Shares.

I have an opportunity to take 14 colonies of black bees on shares. What would be a proper share? Is one-half of increase of both honey and swarms fair? One party owns hives and bees, the other does all the work, furnishing the best of pasturage. Who should furnish hives, or should each furnish his own? Should the original colonies be kept good in case of death by moths or foul brood, etc.? When is the proper time to count the colonies good, now or in the spring?

PENN.

ANSWER.—Be sure to have every particular agreed upon and put down in writing. That's not answering your questions at all, but it's the most important answer you can get, for there's pretty sure to be some misunderstanding about bees on shares. There's no fixt rule as to shares, and it's all as you agree. Much depends on the man who takes care of the bees. If I were putting out bees on shares, I'd be willing to give five times as big a share to some bee-keepers as to others. Depends on what they know, what they can do, and what they will do. Perhaps the most common way is to have each furnish half hives for increase, and take half the increase and half the honey, counting out the original number as belonging the original owner. You can tell better about the colonies by counting in spring, but that's just as you agree.

Hive Dimensions—Running Out-Apiaries.

1. Please give a description of the hive you use. Give length and depth of frames, how many and what style.

2. Can an out-apiary be run for comb honey without an attendant during the swarming period? Or in other words, can one person manage two apiaries, they being several miles apart?

SUBSCRIBER.

ANSWER.—1. The majority of hives are 8-frame, having frames 18x9 inches. But I would'nt advise any one to use a frame of this size, for altho it varies not more than ⅜ of an inch from regular size, and is perhaps just as good, still it is an odd size, and on that account not so good. My later hives, and the ones I am getting as fast as I need new ones, are the regular 8-frame dovetailed hives, with frames of what may be called standard size, 17⅝x9⅛, outside measure. Top-bars of frames are 1⅛x⅞.

2. Yes, if the apiaries are small enough, one person can run several. Of course he must manage to have some kind of control of natural swarming.

Building Combs on Wired Frames, Etc.

I have two colonies, one a prime or first and large swarm, and the other a second swarm (which was small) from the parent hive. I bought two chaff hives and a lot of other things of a lady who once had bees. The frames were not wired, and I was told to wire them. I did so. I did not know how many frames ought to go into the hive, so I put in one eight and the other nine. They were from ½ to ¾ inches apart at the top. Now, I was told to wire these frames by crossing the wire diagonally in the center, in order to support the comb and honey. When the bees went to work they made comb on each side of the wire, one piece of comb interlacing another, and one frame also interlacing the other. Some frames had as many as three different pieces of comb, one piece on one side of the wire and two on the other, and so mixt up that it was impossible to take out a frame without breaking and tearing the comb. I took some of them off, also a few pieces that were made from the quilt down in between the frames. What was the trouble? Was the wire put in wrong, or was it too thick? It was common annealed wire, such as is used for picture-hanging.

I straightened out the combs as best I could, as I was anxious to save the bees and let them go at that, so they could gather enough for winter stores. I think they are all right so far as stores are concerned. What course to pursue in the spring is just what I want to know. Some of the frames were not wired; these were built pretty straight, tho somewhat bulgy. I had some foundation with the hives, which I think is the thin kind for sections; this I used in the frames, putting a strip all along the top-bar; it hung down about four inches from the top-bar; some of it sagged, and some dropt off, which I removed from the hive. Was this comb that was built in chunks (so to speak) what is called burr-comb? How can I best prevent it in the future?

I am a subscriber to the American Bee Journal. I want to make my bees pay, and I want to learn all I can. I am going to get "A B C of Bee-Culture" this winter. Can you recommend me to anything better for a beginner? MICHIGAN.

ANSWER—You are very wise in planning to get Root's "A B C of Bee-Culture." With that and the American Bee Journal you will be well equipt. If only you had had the book a year sooner it would have saved you a lot of trouble.

The bees have surely made a bad mess for you, but they're not much to blame. You had the frames badly spaced, and used the wrong kind of wire, and probably the wrong kind of foundation. The frames should have been spaced that they would measure 1⅜ from center to center, altho 1½ from center to center would work all right, and some of the best bee-keepers prefer it. Much finer wire should be used. No. 30, tinned wire is about right. Brood-foundation should be used, and the wire should be imbedded in the foundation, but all this you will learn about in the book you propose getting.

It's a little bit hard to say what is the best thing to be done in the spring. In any case, leave the frames just as they are till time of fruit-bloom. In the meantime, study up the matter of transferring, which you will find fully treated in your book. Then if you can find a frame that you can lift out, you can gradually get others out by cutting away some of the attachments, then the combs can be properly fastened in the frames just as you are instructed to fasten combs taken from a box-hive.

If it's a bad case, probably it may be as well to wait till about three weeks after it casts a swarm, then there will be no brood in the way.

Foreign Queen-Breeders—Hive-Ventilating Wedges—Gluing Cleated Separators.

1. May I ask you to be good enough to give me, or to obtain for me, the address of a good, reliable queen-breeder in Carniola or Italy?

2. Mr. Pettit's idea of ventilating wedges seems good; there is good reason for their use as against corner blocks. But don't you think the ventilation would be more thorough, if, instead of cutting the wedges to a feather-point, they were left ¼ inch or so thick at the smaller end? As it is they afford a bigger opening. There is really no draft through the hive.

3. And don't you think, Doctor, that editor Root makes a mistake in *gluing* the cleats on his cleated separators? I began this easy way of putting them on once, but speedily desisted upon a neighbor laughing at what he was pleased to call my folly, assuring me that the moist heat of the hive would loosen them in no time. Thinking it best to be on the safe side, I substituted wee wire-nails, even nailing over those I had already glued; yet I have never felt certain that said neighbor's surmises were correct. Kindly tell us what *you* know or think about glue in the interior of hives, for peradventure you have had some experience thereanent.

SOUTH AFRICA.

ANSWERS.—1. Sorry to say I don't know of a single address. Italian breeders used to advertise more than now.

[Owing to unsatisfactory dealings of some foreign queen-bee advertisers in former years, we have not cared to encourage their patronage of our columns.—EDITOR.]

2. Which is best may depend upon the time. Very decidedly it seems better to have the hive level, giving the slant to the floor alone. In spring or early summer, no doubt the sharp edge to the wedge is better—don't want ventilation clear through then. Later on, your plan would suit me better, and in the height of the honey-flow I'm just radical enough to believe that there's nothing quite so good as four blocks under the corners. The only objection I remember to have seen urged against this, is that the bees have only the four corners to climb up. That's bad in theory, and quite a hindrance to the bees, but as in actual practice my bees seem never to be delayed or worried by it, it does'nt worry me.

3. I think I never had anything glued in my hives. But Miles Morton says he has had glued "fences" for I think 10 years or more, and they never have failed. Are you sure that your neighbor is correct in considering the heat of the hive "moist heat"? It surely does'nt look much like it when honey is evaporated in it.

T Supers or Section-Holders—Carniolans and Cyprians.

I got my start of bees only two years ago, and we have had two excessively dry years, and next to no honey-flow at all, so I have had but little surplus honey, and that last September. Now, I make my own hives and have simply increast the stock of bees. I have now 23 colonies in hives that hold 12 Langstroth frames. All have plenty of honey, and have been carrying pollen lively the last four days from maple. I have increast from six, and had only three natural swarms in two years. Now for the questions:

1. Which is preferable in working for comb honey, supers with T tins, or section-holders? I have 1⅞ inch sections. I have but few supers, and no inside filling for them, and desire to buy only that which is the better of the two ways. Which is the better, and give the best results with least expense and labor?

2. Have you had any experience with Carniolan or Cyprian bees? I have all three and five-banded Italians, gentle and good workers, but they gather lots of sweet gum for propolis, and stick things up "for keeps." If either of the above are as good or better workers, and not so much on propolis, I thought of making a change. Mine are all rustlers.

Last spring I saved two colonies that run out of stores, and chilled so that nearly half were dead when I noticed them, by setting a Mason fruit-jar full of hot water close to the combs, and when they were warmed up I poured warm sugar syrup among them, and in an hour they were at work storing it in the combs. They came through all right. ARKANSAS.

ANSWERS.—1. Some prefer one and some the other. Probably a good deal deal depends upon being familiar with them. My own preference is decidedly for the T super. The A. I. Root Co. have something they have just gotten up that they think better than either, but I have'nt had a chance to try it yet. Perhaps the chief advantage claimed for the section-holder is, that when the central frame of sections is finisht or nearly so, it can be exchanged for the outside frame. I would not make use of that advantage, so I don't value it. An advantage that the T super has, is that it will take sections of any width whatever, whereas a section-holder made for a 1⅞ section can't be used for any other width.

2. I have had no experience with Carniolans and very little with Cyprians. I have had bees that were a good deal worse than Italians about gluing, but none that glued less. Probably one reason that you have so much trouble with propolis is, that there is so much material ready for their use in the line of propolis. I doubt whether you will gain anything in that direction by changing your bees.

Loose or Tight Hive-Bottom—Honey-Room.

1. I am about to make about one dozen Langstroth hives for myself, and I would like to know which is the better way to make them, with a loose or tight bottom-board or floor. My old hives have a tight floor.

2. I would like to build a small honey-room in my work-shop. Please give instructions as to how to build it. OHIO.

ANSWERS.—1. Very decidedly I'd have the bottoms loose. Then you can storify when you want to do so, and you can block up your hives from the floor when you want to give more ventilation. Sometimes, however, it is desirable to have the floor fast to the hive, as in hauling. At such time you can fasten the floor to the hive by means of tobacco-staples. If your floor is loose you can fasten it temporarily, but if it's permanently fastened you can't have it loose when you want.

2. Much depends, of course, on circumstances, the size of your shop, position, etc. If you can have it on the south side it will be well, so as to have the heat of the sun. Painted a dark color, it will better absorb the sun's rays. For comb honey you will need things a little different from that which is best for extracted. Without being on the spot it's pretty hard to give specific directions. Partition off what you can spare from your work-room, then plan according to your needs. If you don't have everything planned just right at the start, it does'nt matter so much. The main thing is to have the room, and then you can use it as needed.

Bees Stinging Each Other—How Bees Breathe.

It has long been a question with me why, when one bee stung another, it did not lose its sting, and if it did, what consolation there was to those bees which defended their hive from robbers, if they by so doing finally lost their own lives through the loss of their stings; hence I desire a fuller explanation, as I do not understand about the "breathing holes," as mentioned on page 53, in your answer to "Mass." We have just had a snow-storm of 24 hours duration, which is blowing into drifts. We had over a foot of solid snow before, as a foundation. IGNORANCE.

ANSWER.—By "breathing holes" I mean the spiracles. Now you know all about it, don't you? If you have a minute's leisure let me tell you a little more about it. Bees don't have a system of bones inside as we do, but a bony covering outside. A bony substance called "chitine" covers the outside. That's so hard that I don't believe a sting could be made to penetrate it. The abdomen or hinder part of a worker has six bands or belts of chitine, each band being formed of two plates, one upper and one lower. If you watch a bee when standing still, especially after active exercise, you will see its abdomen alternately expand and contract—get longer and shorter. The different bands telescope into each other, being joined together by a very thin membrane.

Your blood needs oxygen, and it goes regularly to the lungs for it, and you are constantly drawing air into the lungs and then breathing it out again, so as to supply the oxygen. The bee must have oxygen, too, but it works on a different plan. It has no system of blood vessels to carry the blood where it can get oxygen, so it has a system of air-vessels that ramify and ramify, and carry air to every muscle, gland and organ, even to the wings. The spiracles, or places where the air enters, are 14 in number, five on each side of the abdomen between the bands, and one at the base of each of the four wings. You can see that while the sting cannot pierce the horny chitine, it will readily slide into one of the spiracles, from whence the poison will be promptly distributed to all parts of its ramifications. Once in a great while the sting may get into the thin membrane that unites the bands, and then it will stay in the wound, just as it does when the bee stings you. Now you understand, I hope, a little better about the "breathing holes."

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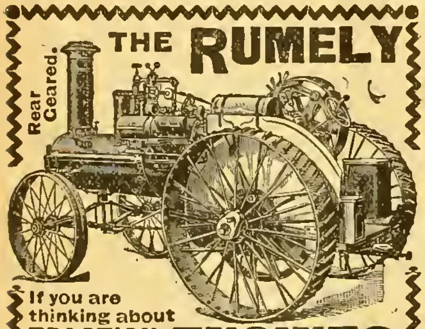
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GENERAL ITEMS

Bees in Splendid Condition.

Bees had a splendid flight last Thursday (Jan. 13), so they are now in fine condition to go through the winter.

GEO. SPITLER.

Crawford Co., Pa., Jan. 18.

Too Dry for the Bees.

It is impossible for me to do without the American Bee Journal. The last season was too dry here in this locality for the bees to gather much honey, but what I did get was fine—all comb honey. I have 35 colonies of 5-banded Italians and hybrids, in dovetailed hives. GEORGE E. ULRICH.

Dauphin Co., Pa.

Good Year for Bees.

I started bee-keeping four years ago with one colony, and last spring (1897) I had eight; from them I had 45 gallons of extracted, and 100 pounds of comb honey, besides eight swarms. I now have 16 strong colonies, and winter them on the summer stands, in Langstroth 2-story 10-frame hives. We had a good year—white clover plentiful, and honey very nice.

Summit Co., Ohio. HIRAM BRADLEY.

Deep Snow and Storm.

The winter was very mild and pleasant until about one week ago when we were blest with a good foot of "the beautiful," making a good 18 inches of snow on the level, and this morning we awoke to find a terrible storm in progress, with snowdrifts of enormous size, and all double-walled hives outside of the bee-house literally buried beneath the snow. It is one of the worst storms that this section of the country has witness in 10 years. I hope it has not reacht as far south as Chicago.

From a "snowed in" bee-keeper.

CHAS. E. CRAWFORD.

Oscoda Co., Mich., Jan. 23.

[Yes, we got it here, too.—EDITOR.]

Bee-Keeping in Mexico.

We had a very nice year in 1897. The rainy reason kept on for a long time, with a sufficient amount of water. Everything did grow splendidly. Just now I am cleaning my coffee, which came out very nice, and is of good quality. Lately we had some quite exceptional cold spells. The temperature came right down to the freezing point, but did not do any harm.

My bees did not do so well as in the seasons before, and I cannot explain why. They had all the year around 3 to 5 frames full of honey in the brood-nest, but did not do much in the supers. I hardly had enough honey to supply my regular customers. The orange season is beginning now, and I am full of hope for the year 1898. F. BUSSLER.

Old Mexico, Jan. 20.

Red Clover with Short Corollas.

Again and again we hear and read of the hope, and trials, to lengthen the tongue of the bee so that the nectar from the corollas of the red clover can be gathered. All admit the fact that red clover is one of the richest honey-plants we have, but all deplore the fact that the corollas are so deep and long that the bee cannot get at the nectar. "If the bee only had a longer tongue!" Yes, or if the corollas of the red clover only were shorter!

It is surely praiseworthy if bee-keepers try to experiment to stretch the tongue of the bee, for the nature of animals is changeable. Look at the different kinds of cattle

Sweet Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order·

	5lb	10lb	25lb	50lb
Sweet Clover (white).	.60	$1.00	$2.25	$4.00
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J. M. Jenkins, Wetumpka, Ala.

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—some good for milk, some for butter, some for beef. Horses—long legs, short legs. Dogs—long heads, short heads. But not only the nature of animals is changeable, but that of the plants is, too. That's why we have so many kinds, and some times *very* different kinds of one and the same species. Think of apples, cherries, and the garden stuff.

Now, I think it would be a move in the right direction if we try to find or propagate a variety of red clover that has shorter corollas and of just as good, if not better, qualities than the old one. What a picture for the bee-keeper! Let us try! Gardeners, be up and doing! This is something for you! Man has accomplisht much. Why not this? (REV.) H. ROHRS.

Rock Co., Wis.

Wintering Nicely—Mild Winter.

Bees are wintering nicely up to date. Those on the summer stands get a flight about twice a week. The winter has been unusually mild. Sweet clover seed that dropt from the stalks last fall is sprouting now, fully a month earlier than other years. Fruit-buds, too, are far advanced; no doubt they will get damaged by frost later on. JOHN NEBEL & SON.

Montgomery Co., Mo., Feb. 14.

Lack of Pollen Cause of Bee-Paralysis.

According to a German bee-keeper quoted in l'Apiculteur for January, 1898, that mysterious bee-disease called "May-disease," paralysis, etc., is mainly due to scarcity of pollen in the hive. Pollen, he says, being a stronger restorer of lost-vitality than even honey, larvæ and bees fed with a too meager supply of pollen will be lacking in energy and strength, which will cause the colony to behave as has often been described.

This fact, he goes on to say, would explain why the stronger colonies (short of pollen stores) seem to be more liable to show the symptoms of the malady, and why the malady disappears as soon as pollen becomes abundant.

Bee-paralysis has also been traced to sugar syrup feeding. Very likely the same cause lies at the bottom of such an assumption—absence of pollen in the sugar syrup; hence the advisability of mixing with the feed some substitute for pollen.

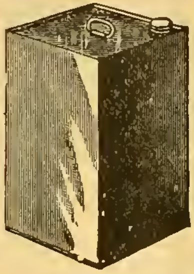
Here is a hint for our apicultural experiment stations. H. DUPRET.

Province of Quebec, Canada.

In Favor of One Big Union.

In the Bee Journal of Jan. 20, under the heading, "The New Union's Membership," the editor asks: "Are *you* a member? If not, you should join at once, and lend your aid in carrying out the important objects of the new Union." With the editor's permission, I would like to state why I have not renewed my membership. I fail to see the use or benefit of being a member of three separate bee-keepers' organizations, when one could accomplish all the objects desired infinitely better than any number can do separately. If we as bee-keepers mean business, we must get together and present a united front to our enemies. If adulteration and the other evils of which we complain are going to be put down, we must have a strong organization with a fighting man at the head of it. Judging from present conditions, it is not likely that more than a small proportion of those who keep bees will ever become members of any union that may be formed, but we have already material enough to make a strong society, and it is no compliment to our intelligence, as bee-keepers, that it has not been done sooner.

There are two bee-keepers' associations in Minnesota, and many States in the Union have one or more, which, if all united, would be a power that would soon make itself felt for good. Let us quit our petty jealousies, if that is what is keeping us apart, and have only one bee-keepers' union in the United States. Can't the constitu-



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☞ A sample of the honey will be mailed to an intending purchaser, for 8 cents, to cover postage, packing, etc. We guarantee purity.

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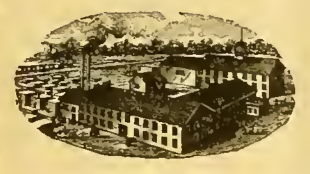

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GEORGE W. YORK & CO., 118 Michigan St., CHICAGO, ILL.

tion of the "New Union" be made wide enough to take us all in, without having to pay two membership fees? "Would that some Moses would arise and lead us out of the wilderness." WM. RUSSELL.
Hennepin Co., Minn.

[All right, Mr. Russell. But suppose you just set a good example of "how to do it," by getting in your own membership fee to the New Union just as quick as you can. Unions become large and powerful by reason of those who join its ranks, and not by people staying out of them.—EDITOR.]

◆

A Beginner's Report.

Last year was my first with bees. In March I bought at a sale 10 colonies, a lot of hives and frames, all costing me $15.00. I moved the bees the next day, moving about half a mile. A few days after moving, one colony left me. The reason, old bee-keepers tell me, was for want of bee-bread, as they had none, but plenty of honey. All went well for some time, until in August I found that one old colony had whipt and almost robbed another old colony. I had quite a time with my third new swarm. The first two I hived without any veil; the third became cross; they began to sting, and I got a veil, then I hived them all right. I don't bother them any more without protection, for it swells so on me. I got about 400 pounds of comb honey, and 200 of extracted. I sold the most around home, and I could have sold several hundred pounds more of extracted if I had had it. I increast to 18 colonies, which I have in a good, dry cellar in good condition.

I think every bee-keeper should set out a few turnips for the bees to work on early, for the bees work on them and get lots of pollen before much else is in blossom.
Linn Co., Iowa, Jan. 19. G. H. FREY.

◆

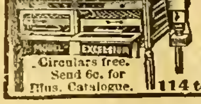
Historical Recollections.

My attention is called to the following statement in Dr. Gallup's "Recollections of an Old Bee-Keeper," on page 68:

"Mr. Langstroth had the misfortune to have many agents who did not fairly represent him, and one in particular who cheated him out of a large percentage of his just dues. I had the supreme satisfaction of balking him in at least two of his schemes."

As Dr. Gallup is recording in the Bee Journal historical as well as auto-biographical facts, I, for one, would be pleased to have him state who that agent was, who was so mean and so dishonest as to cheat Father Langstroth "out of a large percentage of his just dues." Of course Dr. Gallup knows who that agent was, because he says he "had the supreme satisfaction of balking him in at least two of his schemes."

I would also be pleased to have the Doctor give the details of the swindle to which he refers, as historical facts, if reliable, are sometimes very important. This matter to which the Doctor refers may be the means of explaining to the readers of the Bee Journal why Father Langstroth, during his life, especially the latter part of it, was so embarrast financially. So let us have the facts, Doctor, no matter whether the agent you mention be dead or alive.
Kane Co., Ill. M. M. BALDRIDGE.



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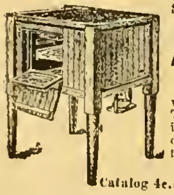

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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Ill., Feb. 21.—Fancy white is not plentiful, and sells at 11c.; good No. 1, or grade of that character is abundant, and sells at 7 to 9c.; amber and dark, 7 to 8c. Extracted, white, 5 to 6c.; amber, 4 to 5c.; dark, 4c. Beeswax, 26 to 27c.

Much of the comb honey is granulating this season.

Detroit, Mich., Feb. 1.—Fancy white, 11 to 13c.; No. 1, 10 to 11c.; fancy amber, 9 to 10c.; No. 1, 8 to 9c. Darker grades are selling lower and in better supply and can be bought at 6 to 7c. Extracted, white, 5 to 6c.; darker grades, 4 to 5c. Beeswax is in good demand at 26 to 27c.

Indianapolis, Ind., Jan. 15.—Fancy white, 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand.

Milwaukee, Wis., Jan. 24.—Fancy white 1-lbs., 11 to 12c.; A No. 1, 11 to 11½c.; No. 1, 10 to 11c.; No. 2, 8 to 9c.; No. 1 dark, 8 to 9c. Extracted, in barrels, kegs and cans, white, 5½ to 6c.; dark, 5 to 5½c.

The supply of honey is good and the quality very nice as a general thing. The demand is not up to our desires, yet we are hopeful it will improve and all will be wanted at fair value. We feel like sustaining prices, and continue to quote as above.

Cleveland, Ohio, Dec. 15.—Fancy white, 12 to 12½c.; No. 1, 11 to 12c.; No. 1 amber, 9 to 10c. Extracted, white, 6 to 7c.; amber, 4 to 5c. Beeswax, 22 to 25c.

St. Louis, Mo., Feb. 9.—Fancy hite comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

Boston, Mass., Jan. 18.—Fancy, in cartons, 12½ to 13c.; in glass, 11 to 12c.; A No. 1, 10 to 11c.; No. 1, 9c.; No. 2, 8c.; No. 3, no sale. Beeswax, 27c.

The demand for honey is light on all grades, with a full supply. Pure beeswax is in good demand, but supply is light.

Philadelphia, Pa., Jan. 18.—Fancy white, 10c.; No. 1, 9c.; amber, 8c. Extracted, white, 5c.; amber, 4c.; dark, 3¾c. Beeswax, 28c.

Late arrivals of California honey have demoralized our market.

Kansas City, Mo., Feb. 19.—Fancy white comb, 1-lbs., 10c.; No. 1, 9 to 10c.; amber, 8 to 9c.; dark, 7 to 8c. Extracted, white, 5 to 5 1-2c.; amber, 4 1-2 to 5c.; dark, 4c. Beeswax, 20 to 22c.

The supply of honey is large and the demand light.

Cincinnati, Ohio, Feb. 8.—There is a slow demand for all kinds of honey. We quote 10 to 13c. for best white comb honey, and 3 1-2 to 6c., for extracted. Beeswax is in fair demand at 20 to 25c. for good to choice yellow, with a fair supply.

San Francisco, Calif., Feb. 2.—White comb, 1-lbs., 7½ to 9½c.; amber, 4 to 6c. Extracted, white, 4½ to 5c.; light amber, 3½ to 4c.; dark tule, 1¾ to 2¼c. Beeswax, fair to choice, 22 to 24c.

Buffalo, N. Y., Feb. 11.—Strictly fancy 1-pound combs are in quite good demand from the fact that it has been so scarce and closely cleaned up, and 11c is quite easily obtained. Other grades do not sell much better, possibly a little, ranging from 9 to 6c., as to grade, etc. Extracted ranges from 4 to 6c., and is in light demand. We can recommend shipping strictly fancy and nothing else, unless you cannot do better.

New York, N. Y., Feb. 9.—There has been a fair demand for comb honey of late, and we are gradually reducing our stock. Fancy white is scarce and finding ready sale at 10 to 11c; off grades white and amber, 8 to 9c.; mixt and buckwheat, 6c. Extracted is in fair demand—California white, 5½c; light amber, 5c.; white clover and basswood, 4¾ to 5c.; buckwheat, 4c.; Southern, 50c. a gallon. Beeswax is steady at 26 to 27c.

Minneapolis, Minn., Jan. 31.—Market is in an overloaded condition on comb honey. Good chance for fancy white extracted at 5¾ to 6c., but comb is at a standstill, particularly if other than fancy white. Best price available on fancy white comb is 10½c., and buyers are slow at that. Darker grades or broken lots are unsalable. If shippers would send in their extracted when it is wanted, and not push undesired comb [and vice versa] the stuff would move more advantageously to all concerned. The trouble is, when a fair price is obtainable some shippers hold out for more and in the end lose by it.

List of Honey and Beeswax Dealers.

Most of whom Quote in this Journal.

Chicago, Ills.
R. A. BURNETT & Co., 163 South Water Street.

New York, N. Y.
HILDRETH BROS. & SEGELKEN,
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Kansas City, Mo.
C. C. CLEMOMS & Co., 423 Walnut St.

Buffalo, N. Y.
BATTERSON & CO., 167 & 169 Scott St.

Hamilton, Ills.
CHAS. DADANT & SON.

Cleveland, Ohio.
A. B. WILLIAMS & CO., 80 & 82 Broadway.

Philadelphia, Pa.
WM. A. SELSER, 10 Vine St.
Mr. Selser handles no honey on commission

St. Louis, Mo.
WESTCOTT COM. CO., 213 Market St

Minneapolis, Minn.
S. H. HALL & CO.

Milwaukee, Wis.
A. V. BISHOP & CO.

Boston, Mass.
BLAKE, SCOTT & LEE., 57 Chatham Street.

Detroit, Mich.
M. H. HUNT, Bell Branch, Wayne Co., Mich.

Indianapolis, Ind.
WALTER S. POUDER, 162 Massachusetts Ave.

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CHAS. MCCULLOCH & CO., 380 Broadway.

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Given as Bounties to purchasers of the improved Danz. Hives and Sections See schedule in my bee-book "Facts About Bees." Tells how to produce honey that sells for the most money. Free for 2c in stamps. Address
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44A26t Please mention the Bee Journal.

Texas.—The Texas State Bee-Keepers' Association will hold its annual convention at W. R. Graham & Son's, Greenville, Texas, the first Wednesday and Thursday in April, 1898. All interested are invited.

W. H. WHITE, Sec.

FREE —A Copy of— Successful Bee-Keeping, by W. Z. Hutchinson; and our 1898 Catalog, for 2-cent stamp, or a copy of the **Catalog for the Asking.** We make almost **Everything** used by **Bee-Keepers**, and at **Lowest Prices.** OUR

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38th Year. CHICAGO, ILL., MARCH 3, 1898. No. 9.

CONTRIBUTED ARTICLES

Hive Entrances—Co-operation for Bee-Keepers

BY DR. O. C. MASTIN.

The advantage of large entrances has been referred to in the bee-papers several times lately. A report of my experience the past season may be of value to others.

I began the season with six colonies, in movable-frame hives, the entrances of which were very small—not more than ⅛ the width of the hives, and about ⅛ of an inch deep. Having decided to give the Danzenbaker hive a trial, I purchast 11 of them, and as the season advanced, lookt anxiously for the appearance of swarms to put into them. But severe frosts destroyed most of the early bloom, and only two swarms came out—one June 5, the other July 9.

High winds throughout the season interfered with their flight, and hot winds during August greatly injured the golden-rod, so that, altogether, the season was a very poor one. Bee-keepers in the neighborhood agreed that it was the worst they had seen here.

Now for results: The swarms were hived on ½-inch starters of foundation. They built out the combs in the brood-frames nicely, and both swarms had abundant stores for winter in the brood-chamber at the close of the season. The first swarm gave 40 well-filled sections, and 10 partly filled; the other gave 20 filled sections, and 12 partly filled. From the other six colonies I secured 12 filled sections and about 20 partly filled.

I attribute the result largely to the difference in size of entrances, the Danzenbaker being ⅞-inch deep, and the full width of the hive. The bees in them never loaft, while at the other hives they hung out by the peck, day after day, when the weather was hot, altho all were well shaded by box-elder trees.

SOMETHING ABOUT CO-OPERATION AMONG BEE-KEEPERS.

I notice some very suggestive items in the American Bee Journal of Dec. 9, 1897. In George W. York's paper (page 770), appears the following:

> "It [honey] should be found upon the plain, but neat and wholesome, tables of the *toiling masses*, as well as on the sumptuous boards of the *rich and royal classes*. The price of the article can no longer be urged as a barrier to its universal demand......But how shall honey-producers proceed to create a more general use of their delicious and health-giving sweet, and consequently increase the demand? Education of the public is the great necessity......It is little encouragement to have produced a big crop of beautiful honey, and then find that there is no establisht market for the same—no organized *co-operative system* through which the large crops can be distributed, or placed upon the market so as to yield the *best* financial returns. It has been discovered, I think, that it will not do to rely wholly upon commission-men......Bee-keepers must some day be organized so as to handle and dispose of their honey *themselves*. They can do it. Then good-bye to the flowery-tongued commission-man, who is a veritable *leech* upon his fellow-men, and should long ago have been everlastingly retired to the robbers' cave whence he came."

Why are not all profit-takers leeches and robbers? Do they belong to the "*toiling-masses*," or the "rich and royal classes?" If some are more greedy than others, their crime is only different in degree, not in kind.

On page 771 (1897) Mr. R. C. Aikin says: "Competition, it is said, is the life of trade, tho in fact it is the death of it."

On page 773 (1897) Mrs. Harrison says:

> "There was a wide field open to the ingenuity of our grandmothers. They spun wool, cotton and flax, dyed and wove, cut and made garments [reapt the full result of their toil], but now the inventive genius of man has superseded this with nimble-fingered machinery......Their [the bees] law is like that of the Medes and Persians, which changes not—the greatest good to the greatest number."

On the same page Dr. Miller says: "In the old countries *rates are so low* that bees are sent to new pastures and returned by rail. We cannot do that in this country."

On page 777 Mr. York speaks of "eternally destroying our common foe—the abominable adulterators of earth's purest natural sweet." A natural result of competition and the profit-grabbing system. I notice also reports of very low prices for honey in California and elsewhere.

S. N. Black—See page 132.

The above items are from some of the brightest lights in bee-culture (and I have been forcibly imprest with the fact, judging from their written articles, that bee-keepers as a class are far from being dull people).

Such remarks are thought-provoking. They show that there are some "screws loose" somewhere. Now, would it not be a good plan to discover just what the cause is, or causes of the trouble are? The first thing to do in the cure of a disease is to remove the cause; and if the disease were a cancer it would be a poor doctor that would apply poultices as a remedy when it was possible to remove it completely by other means.

The causes are mentioned, and the remedy hinted at in the items quoted. The causes are "leeches," "competition," and "nimble-fingered machinery." The remedy—co-operation.

The leeches are profit-takers of various kinds. Consumers are generally obliged to pay several times as much as the producer receives for his labor, or the products of his labor; the profit-takers get the rest. As the profit-takers are a comparatively small portion of the population, and the producers are also the immense majority of the consumers, it is impossible for them to purchase the equivalent of the products of their labor with what they receive for it. And the profit-takers, being comparatively few in number, are unable to consume the balance. This condition is aggravated by "nimble-fingered" machines, which produce without being consumers; and the usury system, rent, etc., which the "toiling masses," as the great body of consumers, are obliged to support, further lessen their ability to purchase the products of labor. It leads to what demagogues call "over-production."

All classes of producers suffer from the same causes, and you may "educate the public" as to the food values of honey till the crack of doom, and, unless their ability to purchase is increast, the trouble will not be remedied. Immense numbers are thoroughly satisfied as to the food value of roast beef, who are not able to gratify their longing for this staple article of food.

Labor-"saving" machines are here to stay; the only question is, how to make a Christian use of them. (The producers should own and operate them, and divide the product equitably.) For a few to enjoy the products of the work of machinery which formerly went to partly satisfy the needs of human beings, can scarcely be called a Christian (Christlike) act.

"Competition is said to be the life of trade, tho in fact it is the death of it," says Mr. Aikin. "Perzactly." Competition is the opposite to co-operation.

There are estimated to be 300,000 bee-keepers in the United States. Under a competitive "system" (?) of industry necessity will compel a large number of them to dispose of their crop as soon as it is produced, and honey-dealers and commission-men will continue to largely regulate the price. Commercial fruit-growers are generally more "well-to-do," and fewer in numbers, and they can come nearer co-operating in the sale of their products. But why, in suggesting co-operation, should bee-keepers exclude other classes of producers? Not until all producers unite and adopt a system of production and exchange which will largely or altogether eliminate the profit, will they improve present conditions to any considerable extent.

I would urge all who are interested, to procure and help extend the circulation of Edward Bellamy's book, "Equality," recently publisht. Price, $1.25. Holt Co., Nebr.

[We can furnish the book referred to above, by Dr. Mastin, upon receipt of the price named.—EDITOR.]

Selling Honey Produced in Frames Holding 4 or 5 Pounds Each, Etc.

BY W. W. M'NEAL.

The pound section, when properly filled with nice, white honey, aside from being so very convenient for retailing purposes, certainly looks temptingly good. But now let me tell how I managed to dispose of several hundred pounds of very nice honey I secured last season in frames holding about four or five pounds.

Well, there was nothing wrong with this honey, more than that there was too much of it to the frame for the grocery trade. I got a number of bright, new tin pans that were just large enough to fit in my regular honey-cases, crosswise, putting in four to the case. This honey was cut into blocks of something near a pound, so that a given number would fit the pan snugly. The comb was first laid on a framework with a wire covering so that the drippings would run through into a pan placed below. Then each piece was taken and neatly folded in paper, the same that the creamery-men use for their butter. This paper is entirely different from that usually found in the groceries.

Take a cake of this honey in your hand, turn back the corners of the clean, white paper, and take a look at the edge of the rich, sparkling thing inclosed, and if it doesn't make you want to lick it, it's all because you havn't got a natural taste.

QUEEN STINGING A WORKER—WORKER-BEE IN A QUEEN-CELL.

Here are two things I witnest the past summer: The stinging of a worker-bee by a virgin queen; and a dead worker-bee in a capt queen-cell. The queen was the largest virgin I ever saw, and had been caged two or three days in the hive. When I turned her loose on the comb she seized a worker and quickly stung it to death. But this did not pacify her, for she immediately caught two more, and tho she did not kill these she handled them so roughly that when releast they showed plainly they did appreciate her action.

The worker-bee in a queen-cell was evidently due to its having crawled into the cell for a final inspection when it was being constructed, the cell being capt over by others. The young queen was also dead. Scioto Co., Ohio.

Buying High or Low Priced Queens—Which?

BY G. M. DOOLITTLE.

I am led to write a few words on the above subject, because many, apparently, do not seem to understand how to discriminate along the line of buying queens, especially those just entering the enchanted field of apiculture. Why I say "enchanted field" is because many go wild over the pursuit before they are hardly initiated therein, thus causing them to pay out money unwisely (money earned through sweat and toil in other pursuits that is often actually needed in the family), for high-priced queens, when such queens are of little if any more value to them than would be queens costing not over one-fifth as much.

The wonderful traffic which we have of late years in queens, has sprung up for two reasons, the first of which is a desire for the improvement of stock; and the second, the call for queens by those who do not wish to rear their own, but wish queens to keep as a reserve force, ready to use in case of queenless colonies, or in giving to the queenless part of a divided colony, whether divided by the apiarist or by natural swarming.

This latter class have in view only one object, that of procuring fairly-good queens at a minimum cost, expecting no more of them than that they will produce plenty of fairly-good worker-bees to secure the honey which their field supplies, and preside over their colonies as all good queens do.

The first or other class buy queens, or should do so, with a different object in view; that is, they want queens which have other value beyond being fairly-good queens in producing bees for the only purpose of honey-gathering, as they wish them for "*breeding purposes*," with a view to the improvement of the stock they already have. The greater the improvement which can be obtained by rearing young queens from the one purchast, and crossing them with drones from the bees we already have in our apiaries, the greater the value of the purchast queen; for therein lies nearly all of the extra value there is in a selected imported queen, or one from the apiary of the best breeder in the world, above a queen reared in your own apiary, without painstaking on your part.

Mr. Alley surprised the world a few years ago by telling that he had a queen worth $100, and others have told us about queens whose bees workt on red clover. Still others have spoken of queens of extra value as giving bees with longer tongues, giving bees that were hardy for wintering, bees that capt their combs so as to present a snowy whiteness, etc. But had you askt any of these if they considered there was $100, $50, $25, $10, or even $5 worth in such queens to place in a box-hive, or in a frame hive that was workt only for the honey which could be obtained, they would have told you at once that their worth did not consist in the amount of honey the bees from this individual queen would produce, but in the good qualities she possest as a *breeder*, which good qualities were expected to be perpetuated in her queen offspring, and in this way, when multiplied by 25, 50, 100, 1,000, 10,000 or 50,000 times—just in accord with the number of queens reared from her—would the real value become apparent. No one queen can be worth even five dollars for what extra honey her bees will produce over the ordinary average of queens; hence it comes about that a costly queen should be procured for only one purpose, which is for the *improvement of stock*. That all do not buy for this purpose is often very apparent. To illustrate:

Two parties in one of the Western States ordered queens of a $5.00 class, one ordered three, and the other a single queen. Supposing that each knew what he was about the breeder sent on the queens without questioning in the matter.

About a year afterward he received a letter from each, one writing that he had kept the queen that was sent him, in a two-frame nucleus during the breeding season, thus allowing her to lay but few eggs during the breeding season, that her life might be prolonged so as to cover several years, this showing that he was more wise than many of our old queen-breeders, who allow some specially good queens for breeding purposes to wear themselves out in egg-laying in a year or two. He further wrote that he had reared over 500 queens from this mother, and expected to rear thousands before she died of old age, to be used in his own and his neighbors apiaries, as the daughters were the best queens for business of any ever had in that locality. He wrote that he was satisfied that the amount paid for the mother was the best investment he ever made.

The other person wrote that he thought the queen-breeder was unreasonable in charging $5.00 each for such queens as had been sent him; that he had tested them beside the queens which he already had, and that he could not see that they produced enough honey above what his own queens gave to compensate for the large price he paid for them. Further writing brought out that he had not reared a single queen from either of the three, and as one of them did not seem very prolific, he thought he would not breed from any of them, for he believed that no advantage would come to him from so doing.

Again, a party in Australia ordered four such queens, taking all the risk on the same, and then allowed the only one which reacht him alive to die some months afterward without trying to rear a single queen from her.

I might give many other instances of like character, but as they would only illustrate the same thing, it would be only a waste of space and time. If bee-keepers do not purchase queens with the expectation of using them to breed from, then the low-priced queens are just as good as any, and the purchasing of those of the costly grade is simply throwing away their money. "A word to the wise is sufficient."

Onondaga, Co., N. Y.

⁂

Bees Moving Eggs—Questions to Think About.

BY D. H. WELCH.

There are some things taught by the masters of bee-lore, and publisht in our bee-literature, concerning which I think we need better evidence before we accept as true. The bee, "Apis Mellifica," is so liable to do unexpected things, that it is easy to make an assertion based on practical observation, that under different conditions will result in work so diverse from the first that one is apt to say, "I dun't know," unless we jump to this, that or the other conclusion and rush it off to be printed as the most important discovery of the age. And being so important, it is likely to be copied by other journals and publications, and, after one or two such transcriptions, come to be given as facts taught by Mr. D. or E., or O., or Dr. M. or T.

One of these is the common statement that bees move eggs and larvæ from cell to cell, and possibly from hive to hive. We often read statements regarding the truth of this matter. Of course, positive evidence, if valid, counts for everything. To the entomologist or student of natural history, or even to one who has observed and studied the egg of the bee, it would seem a pretty delicate operation to remove it from one cell and place it in another, much less from one hive into another; nor do we find worker-bees possest of any such delicate, tactile organs, such as we would think requisite to this removal. But the close observer of natural economy constantly comes in contact with so many strange things, that he does not place much stress on any seeming impossibility, surely not in the face of positive evidence that the thing is done. Every day we see examples of egg-carrying insects (ants, for instance)—why not bees?

About five years ago I purchast a number of colonies about June 10. They were in box-hives heavy with brood and honey, therefore not in the best condition for moving, but the neighbor of whom I purchast wanted the "holy terrors" moved away at once. In the transfer a comb was broken loose, so after the hives were placed in position, this comb being full of brood, was placed against the outside of the hive, and a board placed over it, to protect it from sun and rain, thinking that, possibly, the bees would care for the brood and then abandon the comb. They did care for the brood, but did not abandon the comb—instead, it was occupied and used until Sept. 1 for brood, cells being occupied as regularly as if a queen had been in possession. I did not see bees carrying eggs, nor did I see a queen on the comb. I know only the fact—it was done—but how? The mere assertion of the fact is no proof, and doesn't solve the problem.

Another fact for the masters of the profession to discuss occurred during the season of 1897. A small box-hive colony, presumably crowded, proceeded to build comb under the alighting-board, and it, too, was used as a brood comb throughout the season. Why? How? The closest observation failed to reveal the secret of the mystery.

Harrison Co, Ohio.

⁂

A New Self-Hiver, Queen and Drone Trap.

BY GEO. W. WILLIAMS.

[Mr. Williams shows herewith a new and improved drone and queen trap that can be used as a self-hiving arrangement. The illustrations are so plain that perhaps no further description is needed, so we publish herewith the directions which Mr. W. has prepared, and which explain pretty fully the trap and its varied uses.—EDITOR.]

See that the center or cone slide is pusht so that the cones are open, and the door in the end is closed; place the trap and fasten on the hive as shown in Fig. 1. When the swarm issues the bees will pass out through the perforations in the zinc, but the queen being larger cannot get through, but in trying to get out she will find one of the cone holes and run up into the upper part—she will usually do this by the time the swarm is all out, and can be easily seen up there in front trying to work through the zinc.

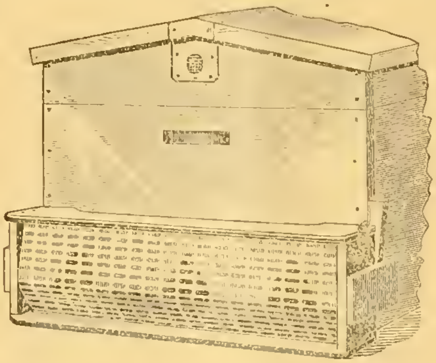

Fig. 1.

Fig. 1.—Front view when in place; also manner of attaching to the hive.

Take the trap off the hive, and while holding it in an upright position, reach in behind and close the cones by pushing the tin slide as far as it will go, thus completely caging her. Set the hive you wish to hive the swarm in *by the side* of the one they issue from, throwing some old cloth or covering over the *old* one to hide it from the bees; place the trap *bottom up* on the new hive, draw out the back slide which opens communication with that part of the trap the queen is in and the hive, and—well, the bees will do the rest. As soon as they miss the queen from the swarm, they will return to the hive they issued from, and will find her and go into the hive together—thus hiving themselves.

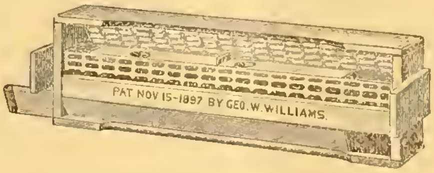
PAT NOV 15-1897 BY GEO. W. WILLIAMS.

Fig. 2.

Fig. 2.—Back view of the trap bottom side up, and showing cone slide partly slipt over the openings in cones, which, when entirely slipt up shuts off communication from one story to the other; also shows back slide partly drawn out, which, when the trap is in position to receive or hive the swarm, opens communication between trap and hive.

If it is preferred—as many bee-keepers practice—to move the old hive to a new place and set the new hive on the old stand after the queen is trapt, and while the bees are swarming around hunting for her, set the old hive to one side, and the new one on the old stand, placing the trap on as before. In this plan there is no need of covering the old hive, as it is away from where it was when the bees went out.

Occasionally a swarm will cluster (settle) before they miss their queen, but if you have her in the trap, fix your hives as before and go about your business; they will break cluster and come back and hive themselves.

After they are hived, if you are afraid they will become dissatisfied and leave—as they sometimes do—leave the trap on as it is; if they undertake to go away they cannot get the queen out, neither can she trap herself for the cones are inverted and closed; when they go to work remove the trap.

When the swarm issues, if it is desirable to use the queen for any other purpose, when she is seen in the upper story remove the trap, close the center slide and take the trap where the bees cannot find it (the swarm will return to the old hive), roll an old cloth around the trap to darken it, and open the little door in the end, holding a wire queen-cage over the hole. The queen will be attracted by the light and run in.

To keep the bees from swarming, put the trap on the hive *bottom* up, with the cones and end door closed, and with the back slide drawn out. When the swarm issues the queen cannot get out nor trap herself, the bees will miss her and return; this they may do several times, or until the young queen hatches out, when the old queen will usually kill the young one, and the bees will usually tear down all remaining queen-cells, which breaks up the swarming-fever in that colony.

In working it as a non-swarmer, the drones that accumulate in the trap should be let out every evening by opening the little door in the end, and they will fly out, and not being able to get back will be found the next morning on the alighting-board, cold and chilled, when they can be raked up and destroyed—a thing much to be desired when we do not want increase. I find this works more satisfactory to me than trying to keep all queen-cells cut out, and requires much less labor.

To simply destroy undesirable drones, set the trap on the hive as for catching the queen; when they come out to take their afternoon flight they cannot go through the zinc, but will find their way into the upper story, and late in the evening or early next morning they can be destroyed. A good way to do this is to immerse trap and all under water for a few minutes.

To stop robbing place the trap on the hive being robbed, and if they have not surrendered they will keep out what few robbers that are bold enough to venture into such close quarters. Polk Co., Mo.

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Ontario Convention and Foul Brood Inspector.

BY EX-PRES. J. K. DARLING.

As this is the season of conventions, I send a few lines anent the meeting of the Ontario Bee-Keepers' Association, held in Hamilton, Ont., last December. The weather was very mild, and as there was some rain there was a little mud, but we had to get off the pavement if it gave us much annoyance. Hotel accommodations were good, and we had a good attendance. There were several other meetings held that week at Brantford and Guelph, and still the unanimous verdict was that the Hamilton one was the best convention we have had for years. The papers were good, and the discussions brought out by them must prove very profitable. As the stenographer's report will be publisht in the Canadian Bee Journal, and perhaps some portions of it in other papers as well, I shall not attempt to give a synopsis at this time.

I would like, however, to notice one little episode, and perhaps in doing so I may correct any erroneous impressions it might have left on the minds of some of those who were present.

A discussion having arisen about the manner in which our efficient inspector of apiaries had managed the business entrusted to him, it was stated by some that he had not "fired" as many colonies as he ought to have done, and the impression was left on the minds of some who were present that the speakers wisht it understood that the inspector had not seen that foul-broody apiaries were properly cleaned up. I do not know as that was the impression the speakers wisht to make, but that was the way it was understood by some of those present. I wish to say that the facts in the case are just the reverse.

It is rather unfair to strike a man between the eyes when his hands are tied behind his back. Some of those speakers know, or ought to know, that the inspector is gagged, if not by statute he is by order of the association, and yet these insinuations are thrown out when the inspector cannot open his mouth in self-defense, or call on persons who are in a position to testify to his thorough work. At the time this discussion took place, there were nearly a dozen bee-keepers present who could have done so, and one or two did stand up for him, but as a general rule bee-keepers do not want it known that they ever had foul brood in their yards, especially if they are selling bees or queens.

During the past year I have been in a position to know something of what I am writing about, but like the inspector, I must tell no tales. What I want to say is, that his work is well done; first, by making a success of the curing and building up of apiaries instead of burning, and so put the owners in a position to secure a good crop of honey if it was to be had; second, by getting cases settled in a friendly manner, that might have developt into ugly lawsuits through parties having disposed of colonies that were diseased; and third, by doing this in such a quiet and disinterested manner that no harm would result to the business of either party because of their having their bees diseased, and I have yet to learn of the first case that ever went to court after being placed in his hands.

Mr. McEvoy is in a very difficult position, and if he could please everybody we would expect to find him something more than human. I will make a few quotations to show that I am not the only person who takes this view of the matter. When the Foul Brood Bill was before Parliament, and before any inspector was appointed, the late Allen Pringle wrote: "If we can get a suitable man for inspector, with the whole Province to choose from, we will do well." And as proof that time and circumstances had not changed his opinion of our first choice, he sated at the meeting of the North American, in Toronto, that it would be a "mistake" for those having foul brood in their apiaries not to get the "foul brood inspector" there at once.

Mr. R. F. Holtermann, of the Canadian Bee Journal, in summing up the good, if not the bad, qualities of the various officers of the Ontario Bee-Keepers' Association, in a former number of his journal, said:

"There is no man who has met as many bee-keepers face to face in Ontario as has our foul brood inspector, Mr. McEvoy. There are many men qualified to fill the position of every officer in the Association, but only one man can fill the position of inspector, and that man is Wm. McEvoy."

Once more: When that successful and practical apiarist, J. B. Hall, was president of the Ontario Bee-Keepers' Association, he said:

"I feel that as bee-keepers and as an Association, we are greatly indebted to our representatives in the legislature of Ontario, for their generous and kindly feeling to the apiarists of Ontario, and especially for giving the Province an efficient foul brood inspector, whose services are put at our command. I am also pleased that the bee-keepers throughout the Province, excepting one or two would-be scientists, have cheerfully, willingly, and thoroughly, followed the inspector's instructions, and made a clean job by so doing, now have clean and healthy apiaries, and will be in a position to reap a bountiful harvest, if the Ruler of all causes the nectar to secrete in the flowers."

Mr. Hall knew what he was talking about, for as president of the Association the work of the inspector had to pass under his supervision.

I trust the above is sufficient to correct any false impressions that may have been made by the discussion above referred to. Ontario, Canada.

BIOGRAPHICAL

S. N. BLACK.

Mr. S. N. Black, of Adams Co., Ill., whose picture we show on the first page this week, is one of the oldest bee-keepers we know, hence we are pleased to be permitted to show his honest face, and give a few facts regarding his busy life, in the American Bee Journal. Here is what he has to say:

I have a shadowy recollection of coming from Tennessee to this place a little over 64 years ago. The country at that time was nearly a wilderness. Our nearest neighbor was a Presbyterian preacher, and lookt enough like Father Langstroth to have been his brother, and, like him, was well posted in bee-keeping. His yard was filled with "bee-gums," as they were then called.

Very soon I was installed as chief assistant in the bee-yard, taught how to find the queen and to clip the wing to keep the bees from leaving; that I must not clip the wing of a virgin queen, etc. When I was perhaps seven years old I was running a threshing machine—I was riding one horse and leading two more, treading out oats, the fastest we had of threshing grain! A swarm of bees past, and I left my "threshing" and followed the bees till they settled. I got a "gum" and hived them, and I have owned bees from that day till this, and possibly I have their descendants now.

I had never seen a moth. They had not made their appearance yet, and how horror-stricken I was when I found my pet "gum" that had swarmed four times, one solid mass of worms! I thought if the moth could kill one "gum" they could kill all; but my teacher told me the bees were doubtless queenless, and if I kept the bees strong and lookt after them a little there was not much danger.

I took care of my father's and my own bees till 1855, when I found my "queen-bee" in Miss Sallie E. Crippen. Following the custom, I "swarmed," and set up a new apiary. The old way to get honey was to kill the bees as soon as the frost killed the flowers, but I never killed any bees. I had the tops of the "gums" so they could be taken off, and the honey taken out, often cutting out the top several times in a season, and I dare not tell how much honey I have taken in one season from one colony, spring count—and I am ashamed to tell how little some seasons!

I think it was about 1857, while working with the bees, a man drove up with a movable-comb hive, and as I did not buy at once, he made me a present of a "right," if I would buy or make a hive. I used King's for awhile, then adopted the Langstroth 9-frame. Like many others, I "invented" (?) hives of my own, and very nearly struck a good thing in making the hive taller and using two small frames in the top for surplus honey, getting near the section of later days.

The seasons here have been very irregular—some extra good, others equally poor, with the poor seasons in the majority. Three good seasons left me with over 100 colonies of bees, and enough money in pocket to induce me to give the bees more attention; but the extra-poor seasons came on—one, two, three, four and five, all together—and I about decided that this was a good place to "not keep bees," so I gave away bees, and some died, till last spring I had 8 weak colonies. Late in the spring came warm showers, and such breeding of bees I never saw—every comb was full of young bees, even to the outside, and last fall I had 30 strong colonies and 400 pounds of honey.

Twenty-five years ago nearly every farmer had bees; to-day I know of four or five persons with bees within four miles of me. The moth is very scarce now. I think they must fly quite a distance, for when bees were plenty within one and two miles, any comb left exposed was soon filled with worms; but comb left out last summer was not molested.

In the many years' experience I think I have gathered a great deal of wisdom, especially in the line of what I don't know—in fact, I think I surpass Dr. Miller in *not knowing*.

S. N. BLACK.

Success is the title of the finest monthly magazine of inspiration, encouragement, progress and self-help for young people that is publisht to-day. The price is $1.00 a year. We can club it with the Bee Journal, both together for $1.80. If you wish to see a sample copy of Success before subscribing, send 10 cents to The Success Co., Cooper Union, New York, N. Y., asking that a late copy be mailed you. We hope to receive a large number of subscriptions for Success. You can't do a better thing than to order it for a year as a gift to some young person of your acquaintance. We have examined the magazine carefully, and know whereof we speak.

A New Binder for holding a year's numbers of the American Bee Journal, we propose to mail, postpaid, to every subscriber who sends us 20 cents. It is called "The Wood Binder," is patented, and is an entirely new and very simple arrangement. Full printed directions accompany each Binder. Every reader should get it, and preserve the copies of the Bee Journal as fast as they are received. They are invaluable for reference, and at the low price of the Binder you can afford to get it yearly.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all others possible to subscribe for it. See offers on page 91.

CONVENTION PROCEEDINGS

Report of the Northwestern Bee-Keepers' Convention, Held in Chicago, Nov. 10 and 11, 1897.

REPORTED BY A SPECIAL BEE JOURNAL REPORTER.

(Continued from page 118.)

SECOND DAY—FORENOON SESSION.

The convention was called to order by Pres. Miller at 9:30 o'clock, and the first question taken up read as follows:

BEST BEES FOR HONEY AND PREMIUMS.

"What class of bees are the best honey-gatherers, or premium-takers at our fairs?"

Mr. Whitcomb—Having been in charge of the apiarian department of Nebraska the past 14 years, I have taken pains to follow this matter up pretty thoroughly. We offer in that State a premium for the largest amount of honey stored by a colony during a year, $25, $15, $10, and $5, making four premiums. This is verified under oath, showing how the colony was wintered, what kind of a colony it was, how it was built up, what the bees were, etc., and then a detailed account of the amount of honey taken. These, together with the premiums awarded on comb honey, etc., I have followed up, and I find that in 99 cases out of 100 they have been taken by the hybrid bees. We talk Italians in our apiaries and at home all the year round, and then when we go to our State fairs we find that the mixt blood has taken off the premium, producing the better honey, storing more of it, etc. These matters are really significant. While the Italian bee is nicer to handle, is less easily alarmed, etc., and less pugnacious, at the same time we find that something else is doing the work everywhere. At every turn we run across the hybrid bee.

Pres. Miller—Would you advise, then, Mr. Whitcomb, that we should try to keep none but hybrids?

Mr. Whitcomb—No, sir. I think that we must have Italians in order to get the good hybrids, that we must keep mixing. If you let them run into hybrids, they will run out, and get to be a small bee. I find no more trouble in handling the hybrid bee than I do the Italian, only I find I need to take a little more time for it.

Pres. Miller—Don't you think that the man who tries to keep up Italian blood will have all the hybrids he wants?

Mr. Whitcomb—Yes, sir.

Pres. Miller—Isn't this true, too—you say that 99 out of every 100 of the colonies are hybrids—

Mr. Whitcomb—99 per cent. of the premiums are taken by hybrid colonies.

Pres. Miller—Isn't it true that the hybrids so far outnumber the pure stock, that we ought to expect them to take a larger number of premiums?

Mr. Whitcomb—With me they don't. In the 30 I have, but two colonies are hybrids.

Pres. Miller—I am not talking about you, but about bee-keepers in general.

Mr. Whitcomb—Among farmers and small bee-keepers you find more hybrids than anything else. In Pennsylvania this fall I found no pure Italians—what might be called pure Italians—and I found them so cross that they would come out in the road, before I got to the apiary, and meet me.

Mr. Thompson—From your experience, do you get more honey from your hybrids than from your Italians?

Mr. Whitcomb—Yes, sir; I get more honey, and a more salable quality.

Mr. Green—I wouldn't agree entirely with Mr. Whitcomb. While I would admit that the hybrids are generally very good workers, indeed, the largest yields I have ever had were from pure Italians.

Mr. Baxter—It depends on what you mean by quality. If you are talking of comb honey, why, there might be the possibility that the comb honey produced by the bright black bee looks a little nicer than the honey produced by the Italian, but when you come to the quality of the honey, I beg to differ there. The quality of the honey produced by the Italian, if anything, is better than that produced by the black bee. That is, the honey itself. The reason it looks better is, that the

Italian puts the capping right close to the honey, and it has the color of the honey, while the black leaves an air-space between, and it looks whiter. I have been buying bees for 20 years, and experimenting with them. I have received queens direct from Italy, and from the Isle of Cyprus, have tried different strains in this country, and I make it a rule to breed up my bees, and I can say, beyond any chance of being contradicted, that the pure Italian is the best honey-gatherer; and I don't breed for size, either. I have some large bees that are not worth anything, and I have some little bits of things that will gather more honey than any large bees I ever saw. I look for the most gentle bees—bees that I can take up in the frames and carry into the house and not a bee move, and I have done it very often without a veil. The pure Italian bee you can hardly alarm, while a black bee, the blacker it is the more fussy it is. That is an experience everybody finds. In the fall of the year, after a right dry season—like this fall, for instance—I go to a hive, look in front, and I will say, "Hello, these look pretty black; I will bet they have no honey." Open the hive, and sure enough, they have hardly any honey. It is scattered all through the hive. There isn't a frame that is full half way down to the bottom. Go to the next hive, and—"These are pretty quiet, they look pretty nice." Open the hive, and it is a fact, I can tell almost by looking at the front what the inside of the hive will be. Year after year my experience is, that we should do away with the hybrids as much as possible; get your stock as pure as you can. I don't care how much you work with them, there will be hybrids all the time. I will have a nice Italian colony here to-day, and probably two years from now it will be almost black. I say, take pure Italians, the purer the better, every time.

Dr. Besse—My experience is that the full-blooded Italians are very pleasant to work with. Almost all of mine are full-blooded Italians. I have some hybrids, and I must say that they build whiter honey, when it is first finisht up, than the others, but if you keep it a few months the cappings will settle down on the honey, and then you can see no difference at all; that is, if you keep it in a warm temperature, the cappings will soon settle down and leave it the same color that the Italian honey is. But when it is first taken out it is beautiful. I have four or five colonies that are almost black, and I must say I took from them this year the handsomest honey I ever saw. It was almost as white as snow; but I noticed, before I left home, that what I had not sold was changing and getting darker in color. I think the black bees store just as good honey as the Italians. And I must say this, that I got from a hybrid colony more honey than I ever did before from any colony, altho at least ¾ of my bees are full-blooded Italians. The Italians are much pleasanter to handle, but I think if you will smoke the black bees enough you can conquer them. I have blacks you can handle without any smoker at all. I never use a bee-veil, and it is very seldom I get stung. But, in order to be safe, I generally give them a little puff of smoke before I go to work.

Mr. Thompson—Which give you the most honey?

Dr. Besse—The most I ever got was from hybrids. The most I got this year was from hybrids. I took from one colony of hybrids 224 one-pound sections, all well filled, and the whitest honey I ever saw.

Mr. Thompson—It must have been a stronger colony than the others.

Dr. Besse—A stronger colony, and they didn't swarm. I kept piling on the section-boxes. May be others, if I had watcht them as closely, would have done as well. But they got a start.

Mr. Baxter—I would ask if Dr. Besse has noticed that Italians will travel much farther for stores than the blacks.

Dr. Besse—I think they will. I would see them further from home. I don't know about the black bees. I don't keep many blacks. My opinion is, from what I have heard and read, that the Italians will go farther than the blacks will.

Mr. Baxter related an instance which led him to believe that the Italians traveled farther than the blacks.

Mr. Baldridge—I understood Mr. Baxter to say that the blacks capt their honey so that it looks whiter right over the honey. Is it true that all black bees do that?

Mr. Baxter—That has been my observation. I don't know whether it is generally so.

Mr. Baldridge—That is not my experience. I think I have seen lots and lots of honey that was capt by the Italians almost as nicely as the blacks. The Oatmans changed their bees to Cyprians the time that idea was prevailing, and they had a serious loss in the sale of their honey. They told me they lost one or more cents a pound, and they got rid of that blood as fast as they could.

Mr. Green—This matter of the quality or, rather, the appearance of the honey, is a very serious matter. But I will agree with Mr. Baldridge, that it is not all strains of Italians that will produce this watery-looking honey. Pure black bees will cap their honey so that it has a chalky-white appearance, and that continues with some of the darker hybrids, but we can get the pure Italians that will cap honey almost the same as the black bees, not to that chalky-whiteness, but practically just as nice. There are only a few strains of Italians, and possibly none of the pure Italians, but those mixt with Cyprians and Syrians, that put the capping down on the honey and make this watery appearance. I had a strain of bees I had neglected breeding up for several years, and they got badly mixt, but they produced practically just as nice honey as the black bees. They were originally from Doolittle's strain. There are other breeders in the country that have the same strain, and they can be obtained, or almost any body, I think, could breed it up.

Pres. Miller—Doesn't the flower that the honey is gathered from have considerable to do with that watery-appearance of the honey?

Mr. Thompson—No.

Pres. Miller—It may have something to do with it, but then the watery-appearance depends mainly on the fullness of the cell, and the different bees make that. I may say that I hear and read with some degree of surprise, the so commonly exprest opinion, that the Italians make so much darker combs than the others. It comes from so many quarters I can't dispute it, and yet thousands and thousands of pounds of honey I have produced, with pure Italians and hybrids of all sorts, and I have never had that fault to lay at the door of the Italians. I don't think they are all alike. I believe, if you are trying to keep pure Italian stock, you will have fresh crosses all the time; and the more distinct the cross, perhaps the better will be the result. I think the best workers I have had within the past two years are of that much despised stock, the Punics: and this is because, I think, there was a very distinct cross—they were not the pure stock. But they're bad about gluing. If you want to sell propolis, get Punic bees.

Mr. Baxter—I believe you practice moving your bees around to different yards, do you not?

Pres. Miller—Yes, I take them out in the spring, and back in the fall.

Mr. Baxter—Have you ever noticed that that makes a big difference in the amount of honey produced?

Pres. Miller—Decidedly.

Mr. Baxter—I move an apiary to a certain place, and that apiary will produce more honey than the same amount of bees elsewhere. It isn't always in the bees alone. There are other things to take into consideration.

Pres. Miller—I have supposed that it was the pasturage.

Mr. Baxter—I can't account for it in that way.

Pres. Miller—I can hardly believe that the moving itself would do it, because that is simply the shaking up. If that would do it, all that you would need to do would be to go and kick all of your hives.

Mr. Baxter—I don't know but what that would be a good idea.

Mr. Baldridge—Do not bees get in the habit, if permanently located, of going certain directions, and continuing to go in certain directions, whereas, if moved to a new location, they have to hunt their pasturage more, and find a greater variety of pasturage? Don't they follow each other, to a great extent, in the old locations, and neglect some fields that may be within reach of them?

Dr. Besse—My experience is, they find forage wherever it is close by. Mr. Baxter says the Italians store richer and better honey than the hybrids. I think the reason is, they work very industriously on the common red clover, and you won't see the hybrids or black bees working on the red clover at all; and the red clover makes very fine honey, a rich-flavored honey, and a little darker than the other grade of honey.

[Continued next week.]

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Report of the Maryland Bee-Convention.

BY W. J. VALENTINE.

The bee-keepers met in Hagerstown, Md., to organize a bee-keepers' association. The meeting was called to order by S. Valentine, who was elected chairman of the meeting, and W. J. Valentine was elected Recording Secretary.

S. Valentine stated the object of the meeting. In his opinion the time had come for the bee-keepers to have a union as much as any other industry; that apiculture is no longer a secondary business, but that it had grown to be a industry of itself; that bee-keeping of to-day is not what it was 50 or 25 years ago; apiculture had developt into a science. He who expects to be a successful bee-keeper must become familiar with the habits of the bees, and work his apiary scientifically, thus the necessity of a union that we may exchange opinions and further the cause of bee-culture, and to add to our mutual benefits.

It was also stated that the product of the honey-bee has been shamefully abused by adulteration, at the expense of the apiarist, and needs protection by legislation as much as any other industry.

It was decided to organize temporarily at present, and defer the permanent organization until the next meeting, and then draft a constitution and by-laws.

A committee was appointed to confer in regard to the adulteration of honey, composed of Chas. H. Lake and L. A. Hammond.

The convention meets again in Hagerstown, March 8, 1898, for the purpose of organizing permanently.

Chas. H. Lake, of the Maryland Agricultural College, was requested to prepare a paper on "Adulteration of Honey," to be read at the next meeting. W. J. VALENTINE, *Sec.*

BEEDOM BOILED DOWN.

Borage for Smoker-Fuel.—Borage is an excellent honey-plant, and it is recommended, in Le Rucher Belge, to dry its leaves, which contain much nitre, and mix them with rags to burn in the smoker.

The Finest Honey in the World has been discovered. According to an item in the Pacific Bee Journal, it is found in the Carbiere mountains of Madagascar. But somehow a dim recollection comes up that the finest honey in the world has been located in sundry other places.

Mixt.—N. Genn has no entrance in hive or floor-board, but raises his hives on lath. A man asks, in Gleanings, how Genn does in winter? The editor replies that Dr. Miller uses a reversible bottom-board, and heads the item, "Hiving Swarms on Poles." And his father is such a strong temperance man!

"**The Life of a Worker-Bee** is about 45 days of actual working time, or about 80 days from the time the egg is laid until the bee has died from overwork, if there has been a flow of nectar."—Geo. W. Williams, in Progressive Bee-Keeper.—Maybe Doolittle better let up on Aikin for awhile, and straighten this out.

Reversing Sections in the Super, for the sake of having them finisht to the bottom-bar, seems to have died out. R. C. Aikin says, in Progressive Bee-Keeper, the plan was a failure with him, because some sections would not be far enough advanced for the comb to stand alone on its head, while other sections were already completed.

Doesn't Like the Fence. — Editor Leahy, of the Progressive Bee-Keeper, thinks fence separators are not durable, too many sharp corners to get knockt off, plain sections will look too much like something with its ears cut off, and bees won't make any evener work than in the old section. But he hopes they'll be a success, as they can be sold cheaper.

Honey the Cheapest Bee-Food.—A writer in the British Bee Journal says: Years ago we bee-keepers used to turn all the honey into money we possibly could, and any deficiency in winter stores was made up with sugar-syrup. This was thought to be a good stroke of business; but I for one have lived to learn that honey is not only the best, but, all things counted, by far the cheapest bee-food.

Hauling Bees to the Bean-Fields in California is not such a little business. M. H. Mendleson tells, in Gleanings, about using a six-ton set of springs, and driving with a 24-mule team over roads with curves so short the driver could'nt see the leaders—"this, too, on one of the most dangerous passes, where the least bad driving out of the track would land all hundreds of feet down, none living to tell the story." In six days from landing in the bean-fields, he has generally had his hives filled with honey and the queens crowded.

Bees Breaking Rules.—It having been fairly well settled that bees do not thin the base of foundation, L. L. Skaggs comes forward in Southland Queen and says he has a hundred combs in which the base is thinner than the base of the foundation given. He also has known bees to seal queen-cells when the larvæ were not over two days old, and says: "I have torn them open and the bees have fed them for several days and sealed them again, and it hatcht out a good queen; so it is with all fixt rules with bees—they delight in breaking them."

Virgin Queen with Prime Swarm.—Editor Lehzen says when a prime swarm is delayed by unfavorable weather until a young queen is piping in a cell, the swarm is sure to issue on the advent of fine weather, the young queen slips out of the cell in the confusion, and accompanies the swarm. Usually in such case the laying queen is stung, and the colony not being satisfied with the virgin queen, returns to the hive. In a few days the prime swarm issues with the young queen. He had one case the past season when seven young queens issued with a prime swarm!

Eggs that Would'nt Hatch.—To the few instances of eggs not hatching is added another reported in Southland Queen, by J. S. Worley. Eggs were placed by the queen in the cells, food sometimes placed around the eggs, but in a few days all would be cleaned out. A frame of brood in all stages was given from another hive, and this was taken care of all right. A frame of the defective eggs was given to another colony, which gave food to the eggs, but they would not hatch. The queen was kept a month, but in that time not more than half a dozen cells were capt.

May Sickness—a trouble of bees in Europe, and thought by some to be the same as bee-paralysis—has at least this in common with the American disease, that neither its cause nor its cure is well understood. Of late, in different quarters, the lack of pollen has been assigned as the cause of the disease. M. Bertrand, editor Revue Internationale, thinks that if pollen figures at all in the case, it is rather because of the bad quality than of its entire absence. The few cases that he has noticed in his four apiaries could not certainly be due to penury in that respect, as pollen was plenty and in excess.

Honey-Tea.—Julius Steigel relates in Bienen-Vater that he used to smile when he read of Pastor Kneipp's patients taking a glass of honey-tea after each noon-day meal, and now he does the same thing himself, only he takes his before breakfast. Bronchitis had become so bad he could'nt speak above a whisper. Used up his means doctoring, tried all sorts of remedies, finally tried a teaspoonful of honey in half cup warm water in the morning. Little by little he improved till no trace of the disease remained. But he continues the daily practice of the morning allowance to the benefit of his digestive as well as breathing apparatus.

Plain Sections made from Old-Style have been put up by the ton by J. E. Crane, and his plan will, no doubt, commend itself to many. He has arranged an arbor for a saw-table so he can put on two saws 1 9-16 inches apart, and coming up just ⅛ inch above the table. He runs the four sides of the sections through, and the edges are left clean and white, much neater than by hand scraping. Thinks a strong man could saw down as many in a day as he would clean of propolis, perhaps more. The sections look undeniably neater, and while he has received no higher price, his honey has sold *more promptly*, which on a falling market might amount to a cent a pound.—Review.

No-Wall Foundation.—While many have been experimenting with drawn foundation with its high walls, Michigan bee-keepers have been experimenting with foundation having no walls, members of the State Association having had a mill made producing an article without any walls whatever, running 16 square feet to the pound. The editor of the Review, after seeing samples from Mr. Bingham, who produced a nice little crop in 1897, using no-wall foundation exclusively, thinks it worthy of a most thorough trial. L. A. Aspinwall, after using 3 or 4 pounds of the foundation, reports very favorably in Review. He says it requires an expert to detect any difference between the finisht product and the natural comb. He thinks it possible that in a poorer season results might not be so satisfactory. The tendency to warp he considers quite an objection, but thinks it may be overcome by fastening the foundation on three sides. On the other hand, Mr. Bingham had no trouble of this kind, as is plainly shown by a beautiful picture showing 13 of the unfinisht sections.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1 00 per Annum.

EXECUTIVE COMMITTEE—Pres., George W. York; Vice-Pres., W. Z. Hutchinson; Secretary, Dr. A. B. Mason, Station B, Toledo, Ohio.

BOARD OF DIRECTORS—E. R. Root; E. Whitcomb; E. T. Abbott; C. P. Dadant; W. Z. Hutchinson; Dr. C. C. Miller.

GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 38. MARCH 3, 1898. NO. 9.

EDITORIAL COMMENTS

[NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Much Excellent Reading-Matter now in our hands must wait its turn for insertion. It seems to us we never had such an abundance of good contributions and of such varied character. Especially is this true of matter for the departments of "Questions and Answers," "General Items," and "Convention Proceedings." Of the latter we have reports of these meetings: Colorado, Michigan, Vermont, Wisconsin, Central Texas, and the Northeastern Ohio, Western New York, and Northwestern Pennsylvania, besides the balance of the Northwestern's report, which is now appearing in weekly installments.

We trust no one will get impatient with us, for we are doing the very best we can to crowd in reading-matter as fast as possible. We would like to add extra pages for awhile, in order to get caught up, but to do so would cost more than we can afford at the price the Bee Journal is publisht weekly. But we really believe that we could fill, with good reading matter, a 32-page paper the size of these pages, and not half try. Perhaps some day we can reach that. In the meantime, please don't be too hard on us if we fail to print your contributions as promptly as you think we should.

◆

Bees Taxable in Iowa.—Hon. Eugene Secor, of Forest City, Iowa, the General Manager of the United States Bee-Keepers' Union, has kindly sent us the following regarding the taxing of bees in the State where he resides:

> For the benefit of Iowa bee-keepers who may not happen to be informed on the subject, allow me to say that under the present law bees are taxable in excess of 10 colonies.
>
> Heretofore bees have not been taxable in this State. The change in the law may be a bit of news to some. I have already received personal enquiries from friends in regard to it, hence this statement.
>
> It can no longer be said that bee-keepers in Iowa are enjoying special privileges. EUGENE SECOR.

The New Union Delegates to the Pure Food and Drug Congress, now in session in Washington, D. C., are General Manager Eugene Secor, Rev. Emerson T. Abbott, a member of the Union's Board of Directors, and Secretary Dr. A. B. Mason. Mr. F. Danzenbaker was selected as an alternate, so that if, at the last moment, any one of the regular delegates were unable to attend, he would be right there on the ground to step into the work.

We feel that the United States Bee-Keepers' Union will be ably represented, and that the whole bee-keeping industry will thus have their wants made known in an effective manner.

We shall look for some interesting reports form the New Union delegates upon their return from Washington. We trust that the work done by this congress may result in great good to producers of pure honey, as well as to all other industries that are so vitally interested in the enactment and enforcement of a rigid national pure food law.

We do not know who are the delegates from the National Bee-Keepers' Union, but we presume they were duly appointed, and are in attendance upon the sessions of the pure food congress.

◆

The National Bee-Keepers' Union election of officers held in January, resulted in the practically unanimous re-election of the following who have for years managed its affairs:

President—Hon. R. L. Taylor; Vice-Presidents—G. M. Doolittle, Dr. C. C. Miller, Prof. A. J. Cook, Hon. Eugene Secor, and A. I. Root.

General Manager, Secretary and Treasurer—Thomas G. Newman.

There were 129 votes cast, out of a membership of about 300.

General Manager Newman, when announcing the results of the election, said that some who were elected "state that their time is too much occupied with other duties to fill the office for 1898; this, however, is the business of the Advisory Board to attend to, as well as to fill vacancies, should any occur." We do not know who have declined to serve, but doubtless they will be known when their successors are named.

◆

Bee-Keepers' Rights in Germany.—At Weinheim, Germany, there is a patent-leather factory, whose skins when spread out were covered with spots supposed to be dropt by the passing over of bees from a neighboring apiary. Suit was brought to have the bees removed. It was not proven that the bees were the culprits, and, besides, bee-culture was necessary for the sake of fertilizing fruit. If this case should go against the bees, numerous other factories would follow suit, and bee-culture as well as fruit-culture suffer great damage. Fruit-culture was in Weinheim before the leather factory, and in this case the weak must be protected against the strong. The case was dismist.

◆

Subscribers Criticising the Bee-Papers.—Editor Hutchinson made a call for the views of his readers as to the Bee-Keepers' Review, asking them freely to mention faults as well as merits. As was natural, few of them mentioned faults (unless it were the faults of rival bee-papers), but a collection of extracts from the letters makes very interesting reading. One man is brave enough to say he doesn't like to see advertisements of a free bottle of medicine, awakening a desire for more at a high price, because of the temporary effect of the alcohol in it. Another thinks it would be an improvment if the writers would limber up as if talking to their fellows, instead of being so very staid with the burden of their dignity and responsibility. It might be a good thing for the writers of the American Bee Journal to take to heart this last criticism. The man that has a good idea, and can tell it in the plainest language, just as if talking quietly with a friend, is the writer who will be read with the most pleasure and profit.

We have often invited our own readers to feel free to criticise the American Bee Journal, and whenever they think they have a suggestion that they believe might help in improving it, to feel free to send it to us. We are not perfect, by any means—neither is the Bee Journal—but we are endeavoring to give as good a bee-paper as we can for the money we have to expend upon it. Of course it is not, by a long ways, up to our ideal of what a perfect bee-paper should be, but just give us about 10,000 regular, prompt-paying subscribers, and we will begin to show you a bee-paper something like the one we have in mind. This "Barkis is willin'" to do his part as soon as the bee-keepers of this country will give him the opportunity. Until then, the Bee Journal will be made just as good as we can make it under existing circumstances.

Wisconsin Farmers' Institutes.—Mr. N. E. France, Wisconsin's Foul Brood Inspector, has sent us a copy of the 300-page Bulletin No. 11, or "Wisconsin Farmers' Institutes," edited by Supt. George McKerrow; 60,000 copies are publisht. It contains an article on "Keeping Bees for Profit," by Mr. Jacob Huffman, and "Foul Brood Among Wisconsin Bees," by Mr. France. Very good pictures of Messrs. Huffman and France appear in connection with their contributions.

In Mr. France's article we find a report that he was enabled to make in connection with his work in 1896 in Wisconsin. It shows 51,709 colonies of bees, valued at $258,545; 2,585,450 pounds of honey sold for $180,981; and beeswax and queens to the value of $9,500, making a grand total of nearly half a million dollars. If all the figures were known for the whole State, it would total nearer one million dollars, we believe.

We do not know how the book referred to is to be circulated, but by addressing Supt. Geo. McKerrow, Madison, Wis., no doubt a copy can be secured.

Honey Snow-Cream.—Mr. C. J. Baldridge, of New York, thinks the following combination is superior to ordinary ice-cream:

> One cup rich sweet cream; ⅜ cup extracted honey of decided flavor; mix and cool thoroughly, then stir in fresh, light, feathery snow till it crumbles, and serve at once. This will be enough for four good dishes.—Gleanings.

Better not wait until next summer to try the above—it's wholly a *winter* dish, apparently.

THE WEEKLY BUDGET

Mr. Albert Unterkicher, of Riverside Co., Calif., writing Feb. 12, says:

"The outlook at this writing for a crop of honey for 1898 is very thin for California, unless we get abundant rains."

Mr. Geo. Walker, of Ontario Canada, says of our pamphlet, "Honey as Food:" "It is the best little thing I have seen in years. I am sure it will sell the honey." Better send us 50 cents and get a trial lot of 50. Every family ought to read it.

Mr. A. P. Reed, of Merced Co., Calif., sends the following testimony concerning the American Bee Journal:

"I enjoy reading the Bee Journal very much. Its weekly visits are lookt forward to with fond anticipation, and I am always realizing—have not yet been disappointed."

Keeping the Honey Demand Supplied, after once working it up, should be the constant endeavor of every bee-keeper. Of course your own crop will run out—perhaps it did long ago. Then, why not buy honey to furnish your customers, and not compel them to wait until another season? We have a large quantity of both pure extracted alfalfa clover honey and basswood, the former in 60-pound cans, and the latter in small barrels holding 280 pounds net. Quite a number of bee-keepers in various parts of the country have had honey from us, and say it gives most excellent satisfaction. One-barrel orders of the basswood, or 4 cans of the alfalfa, we ship f. o. b. Chicago at 6 cents per pound. Or for 8 cents in stamps we will mail you a small sample first. Get a trial shipment, and see how it goes. You should be able to make good wages at selling honey from now until next summer, as the canned fruits and other things put up last fall by the thrifty housewives will be running short now, and they will be more likely to want honey to take the place of fruits, etc.

Mr. Francis Danzenbaker, Editor Root says in Gleanings, "is one of the most progressive bee-keepers he ever met." In proof of the statement Mr. Root acknowledges that to Mr. Danzenbaker belongs the credit of a number of the apiarian improvements in recent years. He says:

> "I believe in giving credit where credit is due, and I will say that Mr. Danzenbaker was the first one to show us the advantage of the dovetailed or lock corner; improved construction in hive-covers; improved construction in bottom-boards; the D. case—this letter D. simply representing Danzenbaker; improved method of crating hives; and last, but not least, directly and indirectly the advantages of fences and plain sections."

That sounds pretty good for Mr. Danzenbaker, and yet, just think of the blame that will be given him for causing so many changes in apiarian fixtures! Changes cost money to every bee-keeper who indulges.

Mrs. A. J. Barber, of Montezuma Co., Colo., when sending us her renewal subscription, also included with it a dollar for her membership fee in the United States Bee-Keepers' Union, and also one dollar for the Langstroth monument fund. Regarding this fund, Mrs. Barber said:

> "I think if we bee-keepers don't raise at least $200 for the monument, we are an ungrateful set, and I shall feel ashamed of our selfishness."

Just so. Bee-keepers should do the generous and just thing to the memory of the lamented Father Langstroth. We hope that due gratitude will be shown in the erection of a monument that will reflect credit upon the living, and be a proper mark of honor to the dead.

The Montreal Witness is one of the strong kind of weekly newspapers. Its principles and convictions are not for sale. Here is what one of the best Canadian religious weeklies thinks of the Witness:

> "Nowhere, we think, is there a press of higher moral tone than that of our beloved country. It possesses, we think, the unique distinction of having a leading journal in its largest city which for over 50 years has been a moral crusader, a champion of reform. In all that time it has not publisht one liquor, or tobacco, or theatrical advertisement. At the sacrifice of much money it has stood true to its high principle, and stands foursquare, a tower of strength, against all the winds that blow."

Mr. H. E. Hill, of Pennsylvania and Florida, has been engaged to edit the American Bee-Keeper, beginning with the February number. For a year or so back that paper has been running some 16 pages (or half of its contents) in "plate matter," composed of a miscellaneous assortment of short stories, anecdotes, etc. This is all omitted now, and the size reduced to 16 pages, filled with strictly bee-reading. Quite an improvement. We hope Mr. Hill will not find that he has undertaken an "up-Hill" job.

Mr. W. R. Graham, of Hunt Co., Tex., wrote as follows Jan. 31:

"I have been taking the American Bee Journal regularly for over 20 years, and am not tired of it yet. It is always a welcome visitor. I have been a bee-keeper from boyhood, and am now over 70 years old. I have been learning all the time—not all learned yet."

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. O. O. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

A Case of Ignorance.

O. O. Poppleton says (page 92) that I was wrong in thinking that one glass in a wax extractor would make as hot work as two. That shows he can tell a good deal better by trying a thing than I can by guessing at it.

Edwin Bevins is troubled to understand (page 83) why I should misunderstand "Iowa" (page 39), and thinks there was an open space between the brood-frames and the cushions. The guess Mr. Bevins makes as to what misled me is partly correct, but not the whole of it. The "empty supers" mentioned had something to do with it, and also the fear that the bees might starve. It didn't occur to me that any one would think of bees starving right on top of sealed combs.

I'm much obliged to these good friends for correcting me, and glad to know such sharp eyes are upon me, for many is the time when answering so many questions that a fear comes over me lest I may mislead in my answers. I'm not sure, however, that some of the rest of you wouldn't make mistakes both in understanding and answering if you were in my place. Questions of so many different kinds, sometimes needing answer when I've hardly time to study over them; sometimes spelt in such way that it is a serious problem to make anything out of them (for example, "woushe" in a letter this week meant "wish"); sometimes spelling all correct but writing so illegible that I can't tell what the spelling is; sometimes having an overstock of ignorance on the subject inquired about—say, friends, if you'd spell me a spell you'd wonder I don't get more things twisted.
C. C. MILLER.

Leaving Bees Packt till Putting on Sections—Workers Going with the Queen when Mating.

1. Will it be right to leave my bees all packt as in winter, on the summer stands, leaving all the packing till time to put on sections? The hives are 8 to 10 inches apart. Most of them are as they were in the fall.

2. Do any worker-bees accompany the queen when she goes on her wedding-tour? They are never quiet till she comes home to the hive.
IOWA.

ANSWERS—1. Yes, providing they are well supplied with stores.

2. I don't know. Perhaps they do.

Telling from Which Hive a Swarm Issued.

Suppose I have 30 colonies of bees, and I go out some day and find a swarm clustered on a tree. How am I to tell from which colonies it issued?
NOVA SCOTIA.

ANSWER—The nicest way is to have the wings of the queen clipt, then watch what hive the swarm returns to. If your queen is not clipt, hive the swarm or get it in some kind of a box and take it away from where it is clustered (it will make it a little surer if you put it in a cellar for the time being), then take a handful of bees from the swarm, dust them well with flour, and watch what hive has the powdered "ladies" return to it.

Getting Increase and Other Questions.

1. I started last spring with four two-frame nuclei, which developt into four apparently strong colonies. They are in 8-frame dovetailed hives, in winter-cases, packt with chaff. If they come through the winter in good condition, I want to increase as much as I can consistently, regardless of honey. What method shall I pursue? I have eight acres of orchard for them to commence on.

2. As the days here during the summer are quite warm, and the nights cool, I kept the hives in the winter-cases during the summer. Would bees kept thus be liable to need further ventilation?

3. Will it be advisable during the heat of the day, in the early spring, to remove the cover of the winter-case for an hour or so, to warm up the hive, previous to removing the packing?

4. If so, about what should the temperature in the sun be?

5. Are there any external indications when they are getting short of feed?
EASTERN WASHINGTON.

ANSWERS—1. The first thing to do is to thoroughly inform yourself on the general principles of bee-keeping, if you have not already done so, by thoroughly studying a good text-book. For there are so many changing conditions to meet, that it is not easy to put down any cast-iron rule of procedure. Moreover, the text-books will give you plans for increasing, which you can use separately, or more or less in combination, according to the exigencies of the case. Possibly for the largest safe increase without caring for a crop of honey, nothing is better than the nucleus plan. By that means you can always keep your colonies strong without running the risk of having the season close with a lot of weaklings on hand.

2. Probably they would. The opinion seems to be gaining ground that it is decidedly advantageous to have very free entrance below, for ventilation during the honey harvest.

3–4. When the thermometer goes up to 50 degrees in the shade, not cloudy, and the air still, if a colony fails to start flying, it may be well to give it a hint to do so, either by doing as you suggest, or by pounding on the hive.

5. Hardly any that you ought to wait for. The carrying out of young brood, that is, the white skins or pieces of skins, is a good sign that starvation is approaching, but you ought not to wait for that.

Laying Worker-Bees.

On page 2 Mrs. L. C. Axtell writes of "laying workers." I am perplext to know what she meant by "laying workers."
CONN.

ANSWER—A laying worker is just what its name implies—a worker-bee that lays eggs. When a colony is queenless and has no means of rearing another queen, it is likely to happen that eggs will still be laid. Formerly it was supposed that a single bee did the laying, but closer investigation shows that a number of workers, if not a majority in the colony, engage in the unusual occupation of laying eggs, which eggs produce living bees, but in no case anything but drones. Get a good text-book and read up all about them.

Changing Brood-Frames—Self-Spacing Frames.

1. My bees are on frames 12 inches deep by 19 long. Would you change to the Standard Langstroth frame?

2. Is the 10-frame Langstroth hive better for wintering than the 8-frame?

3. Do you like self-spacing frames better than the common?
WISCONSIN.

ANSWERS.—1. That's a very difficult question to answer. It's a very troublesome thing to have two kinds of frames, and if you have had good success with the ones you have, and if you have nearly as many hives as you think you will want, I should do a good deal of thinking before making a change. If you have only a few, and you think you can do about as well with the standard frame, then you may be wise to change, if for no other reason than that you can more readily and more cheaply get what's in fashion. Moreover, if you want to buy or sell colonies of bees, it will be better to have the regular frame.

2. Yes and no. Left to themselves, a colony in a 10-frame hive is safer for wintering in most cases than in the 8-framer. The two additional frames make it almost a sure thing that there will be more honey in the hive, consequently less danger of starvation. With sufficient care and proper management the 8-frame hive may be as good or better. Given two colonies equal in every respect, one in an 8 frame hive, the other in a 10-frame, each with the same amount of stores, and I'd rather risk the smaller hive for wintering, if for no other reason than that there is less room to keep warm.

3. After a few years' trial with the self-spacers, I must say I give them the preference decidedly. If there were no other reason, the quickness and exactness of spacing would turn the scale in their favor.

Preventing After-Swarms — Getting Bees Out of Supers, Etc.

1. What is the best, quickest and surest way to prevent all after-swarms?

2. If a person wishes to get as much honey as he can from his bees, would it help to prevent after-swarming?

3. When you pile several supers of honey on top of each other for the purpose of getting the bees out, what escapes do you use above and below, how many supers do you put together, and how long does it generally take to empty them?

4. I would like to know if you think my bees are all right. I winter them in the cellar where vegetables and tobacco (not very much of the latter) are kept. The thermometer is never under 38 degrees, and hardly ever over 42 degrees. I open the window once every week to let in fresh air. The bees are in the Heddon hives with the cover and bottom-board tight, but the entrance is open full width. I clean out the dead bees about twice a week with a wire hook. As yet very few have died. When I go into the cellar I cannot hear the bees, but when I put my ear close to the hive I can hear them just faintly humming, but sometimes they hum pretty loud when they are disturbed a little. I wintered four colonies in the same way last winter, successfully, except in one weak colony the unoccupied combs were a little mouldy.
IOWA.

ANSWERS—1. When the colony swarms, set the swarm on the old stand, putting the old hive close beside it. Six or seven days later take the old hive away and set it on a new stand. The field-bees will all go back to the swarm after returning from the field, weakening the old colony so much that it will give up the notion of swarming. In most cases it would be sufficient to move the old hive to a new location at time of hiving the swarm, but it will weaken it a good deal more to wait a week, for lots of bees are hatching out every day.

2. That depends. With you in Iowa, probably you will get more surplus to throw all the strength possible into the swarm, (unless, indeed, the bees are satisfied not to swarm.) If, however, the bees should swarm very early, (in some places they swarm in April), and the main honey-flow comes late enough so the swarms could not take advantage of it, then it might be that more surplus could be got from the old hive, prime-swarm and after-swarm than if the after-swarm was prevented. But in Iowa, it's pretty safe to say, that every after-swarm you hive cuts down your honey crop.

3. The supers are piled 10 or 15 high, altho 8 is much better than 15; a Lareese escape is put under the pile with free chance for the bees to get out under the escape, and a Lareese escape is put on top, unless, better still, a large cone escape is put on top. If piled early in the day on a bright day when bees fly well, an hour or two may empty them, otherwise a few may stay in all day. Of course a high pile will not be cleared so rapidly as a small one.

4. As a rule, 38 to 42 degrees is too cold for a cellar. But there is no little difference in thermometers, and it is just possible that an exact thermometer would show that your cellar never gets below 40 degrees. At any rate, no matter what the thermometer says, if the bees say its all right it is all right. That is, if they keep as quiet as yours are. But isn't it a good deal of care to go down twice a week to clean out the dead bees? Possibly its only fun for you, but its not so certain that the bees like it. Better raise the hives half an inch or an inch higher from the bottom boards at front, so as to give more room, and then you needn't trouble cleaning them out so often. My bees have now been in the cellar more than nine weeks and the hives don't seem to need cleaning out yet, and probably will not be cleaned out till they are taken out in the spring.

Cleated or Fence Separator.

Please describe a cleated separator. Is a cleated and a fenced separator one and the same? I have been using a frame (of my own make) with a no-bee-entrance section for 14 years, but if there is anything better I want to know it.
WISCONSIN.

ANSWER.—Fence, fence separator and cleated separator are all one and the same thing. Instead of the separator being all in one piece, it is in several pieces, perhaps four, the pieces being ¼ inch or less apart, and fastened together by cross-cleats on each side, these cleats being ½ inch or less wide, and about ⅛ thick, altho these figures might vary. Perhaps yours may be the same thing, and at any rate it might be useful if you would report about yours.

Wintering Out-Doors—Chaff Hives—T Supers.

1. I want to keep quite a number of bees, and want to winter them on the summer stand. What is the best and the cheapest way?

2. Please give me your opinion as to which are the best two and simplest chaff hives that are manufactured, or the best in every respect for comb honey.

3. Is the T super better, or as good, as others?
NEW JERSEY.

ANSWERS.—1. That's a very difficult thing to answer. Locations vary, and even in the same location one man will winter bees better in one, and another in another way. Perhaps as cheap a way as any good way is to have the hives close together, well protected beneath and on all sides except perhaps the front with leaves, planer shavings or something of the sort. But to give full minutiæ would take more room than can be given here, and you will do well to study up the whole subject in a good bee-book.

2. There is nothing impossible about there being a dozen different kinds of chaff hives, and yet as I don't remember ever to have heard of more than one, I'm not able to give an intelligent reply to your question.

3. Opinions differ very much as to what is the best surplus arrangement. After trying wide frames and T supers on a large scale, and a number of other surplus arrangements on a smaller scale, I have never been able to find anything that suits me so well as the T super. Of course, something depends on knowing just how to use a surplus arrangement in the best way.

Wintering Bees in Tennessee.

I began keeping bees last April (1897). I have been a constant reader of the American Bee Journal since that time, and owe what success I have had in the bee-business to it, and the failures I charge to myself. I am in trouble now, and look to you, through the American Bee Journal, to help me out. Our winter here has been very warm, and bees have been able to fly almost every day up to 10 days ago. In the fall I contracted the entrance to about 4 inches, and left all the supers on the hives. I thought this would be a good plan here to winter on the summer stands. Yesterday (Feb. 4) I opened the hives (it being warm enough for the bees to fly), and found water on the top of frames and in the super, and the bees seemed to be buzzing as if hot (in fact they were). One colony had died. The combs and sections in the supers were damp and moldy. I opened the entrance the full length. Was this right? Should I take off the supers? I have told you the condition they are in, now please tell me the remedy, and to save the other colonies. I have 18, all Italian, and two imported queens, which I purchast direct from Italy.
TENNESSEE.

ANSWER.—What made you leave sections on your hives over winter? Please don't do that again. Just as soon as the bees stop storing, take off all sections so they will be fresh and nice to use another season. There may be no objection to leaving a super on without sections, but you can fill it up with leaves, planer shavings, or something of the sort, and not spoil the sections. The trouble is that your hives were too close, the moisture from the bees not having a chance to escape. You did the wise thing to open the entrance full width. That will give the hives a chance to dry out. If the winter continues as warm as it has been, it may be well to open up a very little on top, so as to allow the moisture to escape in that direction.

Question on Packing Bees for Winter.

I have packt the super with dry sawdust and chaff, with two passage-ways in each frame about ⅛ way from the top of the frames, and about 2 inches space over the brood-frames. The bee-entrance to each hive is one inch deep and 5 inches long, with wire-screen covering, with a bee-passage at the bottom to keep mice out, which gives good ventilation. I have a shade-board in front of the hive, and have the hive cracks, etc., all filled with clay, also top and back of the hive covered with boards, with good, tight covers on the hives. The hives are about 8 inches from the ground, with plenty of ripe honey, and at this time the hives are covered with about 2 feet of snow. Now, what changes would you make to winter bees out-doors?
MAINE.

ANSWER.—Possibly you might make an improvement on the sawdust (which some consider a little heavy). Dry leaves are well liked, and whether because better or more convenient, planer shavings are popular. If you mean there are 2 inches of empty space directly over the brood-frames, I should say that it might be an improvement to have barely enough space for bees to cross over from one frame to another. If I understand correctly the entrance is covered with wire-cloth, all but enough at the bottom to allow a bee to pass through, the wire-cloth having meshes too fine for a bee to pass. Possibly that could not be improved, and possibly it would be better to have the whole entrance covered with wire-cloth having about three meshes to the inch. That would allow a bee to pass through at any point while effectually excluding mice. But if your bees winter perfectly it will be pretty good evidence that even such slight changes are not needed.

The remainder of your questions, relating to the culture of fruit-trees, belong to a horticultural rather than an apicultural journal.

The T Super vs. Pattern-Slats.

What advantages do you find in T supers over pattern-slats? I am much troubled with the slats, and if the T supers are no better, somebody should get up one that is. Some of the slats sag a little, other supers sag a good deal. When they are tiered up two may be so far apart the bees put comb between them, while others come so close they stick them together with bee-glue. Hold forth regarding this.
ILLINOIS.

ANSWER.—I'm not sure what you mean by pattern-slats, but suppose you mean what are called "section-holders," consisting of a wide frame without any top-bar, the bottom-bar being scored out to fit the sections. My experience with this sort of surplus arrangement is very limited compared with the T super, having used the latter in large numbers for years. The editor of Gleanings cannot understand how I can prefer the T super. Possibly if he were as familiar as I am with it, he could understand it better. There's a good deal in being used to a thing, and learning to take advantage of all the little points. Possibly if I should use section-holders as many years as I have T supers, I should find more good in them. But to answer your question.

First, I may mention one thing in which the T super has *not* an advantage over the section-holder. When the central sections are about finisht the outside row of sections can be jumpt into the middle of the section-holders, and this cannot easily be done with the T super. This is the great point claimed for the section-holder, but as I do not consider it the best practice so to shift the sections, the advantage does not count with me. The T super is more easily filled than the section-holder, for the sections can be put in the T super as rapidly as they can be set in a row on a table. It is much easier to empty a T super than a section-holder. The T super has T tins which are so firm that there is not the least tendency to sag, whereas the sagging of the section-holder may make trouble. But go slow about changing to the T super until you find they are better in *your* hands. There are some little kinks in using them that must be learned to get the most benefit from them.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

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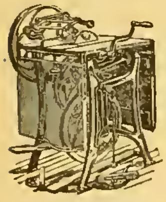

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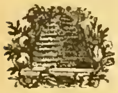

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QUESTION-BOX

In the multitude of counsellors there is safety.—Prov. 11-14.

Publishing Honey Crop Prospects.

Query 69.—Is it wise for the bee-papers to publish reports as to the honey-crop, or crop prospects, as reported by bee-keepers from various parts of the country? Some think that to do so is apt to injure the market price of honey.—OHIO.

E. France—In my opinion, yes.

Prof. A. J. Cook—Always let on the light. So I say, yes.

G. M. Doolittle—Possibly there is something in it; but I like to read the reports, all the same.

W. G. Larrabee—I like to hear the honey crop reports, but I hardly think it wise to publish them.

A. F. Brown—I do not know. I like to read what others are doing, their failures as well as successes.

Chas. Dadant & Son—You might as well withhold the crop reports of wheat, hogs, etc. Don't keep the light under the bushel.

R. L. Taylor—Yes. It may sometimes injure the market price, and sometimes improve it, and will always aid in fixing the price where it ought to be.

J. M. Hambaugh—On the theory of "Where ignorance is bliss, 'tis folly to be wise," the reports might be unwise. Let us have the reports, however.

Dr. J. P. H. Brown—I am liberal enough to believe that *correct* reports do no injury to the producer; but, on the contrary, he can work such reports to his benefit.

C. H. Dibbern—1. Yes, general information is what we all need to conduct our business on intelligent principles. 2. No, it only adapts the market to prevailing conditions.

Wm. McEvoy—When any bee-keeper sends in an honest and very fair report of the honey crop in his locality, I believe that the editors of all bee-papers are in duty bound to publish such reports, and should.

Rev. M. Mahin—It is as wise to publish reports of the honey crop as of the corn or wheat crops. In case the reports are not favorable the tendency will be to increase the price. I think the truth should be publisht.

Emerson T. Abbott—I can see no special objections if bee-keepers are disposed to report the result of their season's work. As for myself, I am not in the habit of saying much about my private business in public print.

Dr. C. C. Miller—That's a troublesome question. Harm is sometimes done by rose-colored reports, but it's more the fault of bee-keepers than bee-papers. It would hardly do for the papers to suppress information. We want to know, you know.

J. A. Green—If we could have regular reports from reliable men in the various honey-producing localities, they would be of great value. Ordinary correspon-

Sweet Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)	.60	$1.00	$2.25	$4.00
Alsike Clover	.70	1.25	3.00	5.75
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Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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Is now ready for your orders for QUEENS of either **3 or 5 Banded Italians and Steel Gray Carniolans.** More than 300 Tested Queens to begin with. Untested, either race, 75 cts. each; June and until October 50 cents each. Tested $1.00 each. Good Breeders, $2 each. Straight 5-Banded or "Faultless" Queens, $5.00 each. Satisfaction guaranteed.

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BEE-KEEPERS! Let me send you my 64-page Catalog for 1898.
J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing.

dents seldom mention anything but good yields. This is misleading, and often has a very injurious effect. I think this was particularly the case during the past season.

Eugene Secor—If bee-papers do not publish reports of the honey crop, how are we to know what the crop is? It is the *prospective* honey crop that injures the business, especially when great things are publisht that do not come to pass.

Jas. A. Stone—*Decidedly*, yes! It is the only way we have of knowing what our honey is worth. I have often seen bee-men who do not read the bee-papers, sell their honey (because they had a large crop) for 10 cents per pound, when it was worth 15 cents in Chicago.

G. W. Demaree—Wise or unwise, our bee-periodicals would be awfully "dry" if they for any cause failed to give us the news from the honey-fields. The consuming world do not see the bee-papers. Besides all this, some of us despise the tendency of the times to "sail under cover," that is, hide facts. Few apiarists now living believe in "over-production" of honey.

J. E. Pond—In my opinion it is advisable for bee-papers to give items of news that affect the honey interest in any wise. I do not see how any one can be injured by their so doing, and the honey crop is so varied in various sections that I cannot see how the market price can be injured thereby. It is not the *news* that raises or lowers the price, but the actual question of supply and demand, a rule of political economy that is inflexible.

Mrs. L. Harrison—I think that it is an injury to the pursuit. No one can tell what the harvest will be, until it is removed from the hive. As an example, a man came into this city in the early autumn with choice white section honey, which he offered for 8 cents per pound. A groceryman who purchast said at the time it was "worth 12 cents, but that was his own figure." He had read of the great crop, and being a poor salesman, wanted to sell before it came to market freely.

GENERAL ITEMS

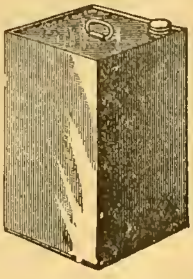
Poor Prospects for California

I think we are in for another poor season, if not a dry year. All rains have been followed by hard north and east winds, which have dried out the soil again, and this section of the State looks dry and barren. This time in the year we should have a nice green growth of vegetation. Many people are worried, and stockmen are losing from starvation on the ranges. Hay is nearly double its usual price, and those having hay for sale are holding for exorbitant prices.

M. H. Mendleson.
Ventura Co., Calif., Jan. 3.

How to Get Alsike Clover Sown.

Feeling that I am so much indebted to the American Bee Journal, it is a duty as well as a privilege to answer one question, or to tell my experience. Some weeks ago I was reading of one bee-keeper that said he had tried to get his neighbor farmers to sow Alsike clover seed. He had told them of all its good qualities, and they said he



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We can furnish **White Alfalfa** Extracted Honey, in 60-pound tin cans, on board cars in Chicago, at these prices: 1 can, in a case, 7 cents per pound; 2 cans in one case, 6½ cents; 4 cans (2 cases) or more, 6 cents. The Cash MUST accompany each order.

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Smoke Engine (largest smoker made)	4-in. stove.	Doz. $13.00;	each, by mail,	$1.50
Doctor	3½ in. stove.	Doz. 9.00;	"	1.10
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Large	2½-in. stove.	Doz. 5.00;	"	.90
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Little Wonder (weight 10 ounces)	2-in. stove.	Doz. 4.50;	"	.60
Honey-Knife		Doz. 6.00;	"	.80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.
January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

Mr. Bingham, Dear Sir:—Please send per mail a 4-inch Smoke Engine. I have one of your Smokers; it is too small in time of trouble.
February 21, 1898. A. F. SEWARD, Riverside, Calif.

9A9t **T. F. BINGHAM, Farwell, Michigan.**

Page & Lyon Mfg. Co. New London, Wisconsin,

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They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

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that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

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SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalogue and be your own judge. Wax wanted at 26 cents cash, or 28 cents in trade, delivered to me.
AUGUST WEISS, Hortonville, Wisconsin.

To Seed Buyers
There are 3 classes of Seed Catalogs.
One class caters to the patronage of those who are mislead by overdrawn pictures and statements that are untrue. Another class takes advantage of the fears of those, who, through a natural desire to secure the best seeds, will pay fancy prices for what often proves to be very ordinary stock. THERE IS YET ANOTHER class which seeks the trade of those, who want the best seeds possible to obtain and are willing to pay a reasonable price for them. TO THIS CLASS OUR CATALOGUE BELONGS. It is mailed FREE to those who write for it.
Shaw's System of Pasturing Sheep....
This pamphlet is given away to our customers.
NORTHRUP, KING & CO., Seedsmen, 26 to 32 Hennepin Ave. Minneapolis, Minn.
N-K&Co's STERLING GRASS & CLOVER SEEDS RECLEANED AND TESTED
Our STERLING Brand of Grass and Clover Seeds represent the best qualities obtainable.

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LEAHY MFG. CO. INDEFATIGABLE HIGGINSVILLE, MISSOURI.
As we have many customers in the Northwest, and believing they will appreciate the low freight rates obtained by purchasing goods from a railroad center nearer to them than we are, getting a direct through-freight rate, thus cutting the freight in half, we have establisht a branch house at 1730 South 13th St., Omaha, Neb., where we will keep a complete line of all Apiarian Supplies, the same as we do at Higginsville, Mo. With the quality of our goods, we believe most bee-keepers in the West are already acquainted, but to those who are not, we will say that our goods are par excellent. Polisht, snowy-white Sections, beautiful straw-colored transparent Foundation, improved Smokers and Honey Extractors, and all other first-class goods, are what we sell. Kind and courteous treatment and honorable dealing our motto. On these bases, we solicit an order, feeling sure that if we sell you one bill of goods you will be our customer in the future.
☞ PROGRESSIVE BEE-KEEPER, 50c per year. "Amateur Bee-Keeper," 25c. Both for 65c., postpaid. Sample copy of the PROGRESSIVE free, and a beautiful Catalog for the asking.
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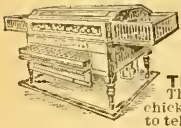

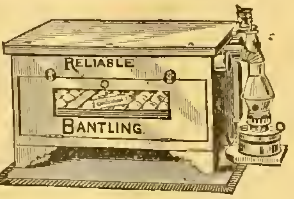

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and in the production and brooding of chicks she has been supplanted by the better and everyway
RELIABLE INCUBATORS AND BROODERS
They Hatch and Brood when you are ready. They don't get lousy. They grow the strongest chicks and the most of them. It takes a 224 page book to tell about these machines and our Mammoth Reliable Poultry Farms, Sent by mail on receipt of 10 cents. Send for it now.
Reliable Incubator and Brooder Co., Quincy, Illinois.
37D17t Please mention the American Bee Journal.

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FIELD
"MORTGAGE LIFTER"

$300. for Six Potatoes!
We shall introduce this year for the first time the wonderful new MORTGAGE LIFTER POTATO and shall pay the above sum in prizes for the best six potatoes grown from one seed potato. **THE EARLIEST POTATO IN THE WORLD.** Tested 4 years. It is white, of excellent quality and **A MAMMOTH YIELDER.** Be the first in your neighborhood to try it; next year you can sell it to others. Price this year, **50 cents for Single potato.** **First in the Market Cabbage** is the earliest to head; beat your neighbors by weeks. **Sure Head Cabbage**, all head and sure to head; large size, good quality and good keeper. Single heads have weighed up to 60 lbs. **Climbing Cucumber**, entirely new—a perfect wonder. Climbs any trellis or support 6 to 8 feet high; prolific early fruiter. **Six Week's Turnip**; earliest grower, easy grown, good size and white as snow. **EARLIEST TOMATO IN THE WORLD**—greatest success for earliness, smoothness and quality. **Has fruited in 50 days. Big Prizes Awarded** for ripe tomatoes grown in least number of days. Instructions with seed.
☞ One whole potato by mail (packed from frost) instructions for prizes and a packet each of the five early vegetables and catalog of "SEEDS THAT GROW" for 25c. *Fairview Seed Farm,* Box 88 *Rose Hill, N.Y.*

was looking out for his bees, and they did not sow any.

Now, I wish to tell how I workt it. Last spring I ordered of George W. York & Co. 50 Alsike clover leaflets, and made a list of about 20 farmers around me, took the list and the leaflets to the postmaster (he being an intimate friend of mine), told him what they were and my object, and those that had not gotten their mail that day we slipt one in their box, and those that had received theirs were left until the next day, so each of these men received a leaflet, and didn't know where it came from, and in a few days they were talking about Alsike clover, and all could talk intelligently.

One man came to me and said he had received a circular on Alsike clover (I told him I had one, too), and that he was going to get some seed when he got his other to sow the farm that joins our place.

I think I am safe in saying that there were 50 or more acres of Alsike clover sown mixt with other seed. I shall do the same thing again this spring. J. W. P.

Reports for Several Years.

I brought to this place 26 colonies in the fall of 1893. I lost 25 in the cellar, and in 1894 I started with one colony, bought two nuclei, and increast to eight. In 1895 I started with eight, increast to 26, and sold 1,000 pounds of comb honey. I then wintered 24, and in 1896 increast them to 52, sold 2,600 pounds of comb honey, and wintered 50. In 1897 I increast from 50 to 100, reared 70 young queens, and sold about 900 pounds of honey, all told. In 1897 I had to depend upon others to look after the bees; this shows that all of us do not work the same.

The last was a very poor year for me, at least in the way of gathering honey, tho most of my neighbors did not get one pound of honey of any kind. C. CRANK.

Oscoda Co., Mich., Jan. 24.

Wiring Frames—Report.

I wish to give my way of wiring frames. Instead of punching holes in the end-bars for the wires, I use ⅜-inch blind staples. My frames are 8 inches deep inside, and it takes four staples in each end-bar. One is placed one inch from the top-bar, and one the same distance from the bottom-bar; the other two 2 inches apart between the end staples, all on the inside of the frames. I drive the staples about two-thirds their length, and crosswise of the bar, then weave the wire through the staples and fasten the end of the wire with a small tack, then tighten up the wire and fasten the other end; then if I find the wire too slack, I can tighten it to a nicety by driving the staples to any depth that is called for.

The staples are inexpensive, as one pound will be plenty for 25 hives, 10 frames to the hive.

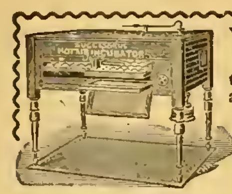
My honey crop last season was 2,000 pounds from 35 colonies, spring count. The honey sold for $200. I can't put an estimate on the fun I had with the bees.

WM. M. BARNES.

Richland Co., Wis.

The Season of 1897.

The last season was not a very successful one, yet much better than the three preceding years. I started last spring with seven colonies, increast to 15, and secured 100 pounds of choice comb honey, and 200 pounds of extracted, of No. 1 quality. The bees built up well on apple-bloom. Later, white clover was very plenty, yet it did not yield much nectar on account of wet weather. In July Alsike clover was in full bloom, and the bees made up for lost time in gathering honey and in swarming. The honey was the best I have ever secured. The extracted candied as early as the middle of October. The latter part of October we had very hard frosts, which killed all of the fall flowers, so the bees could work no more, yet they swarmed with nice, large queens with them. Something I never saw before, bees swarming with no chance of



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gathering honey. Is that a common thing for bees to do? I have since heard that some of my neighbors' bees did the same thing. We had plenty of fall rain, with good prospects of more white clover next season. Success to the American Bee Journal.

JOHN H. WHITMORE.

Jackson Co., Mich., Jan. 28.

Cash PAID FOR Beeswax

For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 25 cents per pound, CASH. No commission. Now if you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

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Tested Queens in April and May, $1.00. Untested, 75c. Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

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Best honey-gathering strain in America. Tested, $1.50. Untested, $1.00. Write for a Circular. **J. D. GIVENS, Lisbon, Tex.**
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SEE THAT TWIST

The twist is what makes the Kitselman Fence famous. With our Duplex Automatic Machine you can make 100 styles and 60 rods per day of the Best Woven Wire Fence on Earth, Horse-high, Bull-strong, Pig-tight

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MAKE A GOOD WAGON.

Unless a wagon has good wheels it is useless. THE ELECTRIC STEEL WHEELS are good wheels and they make a wagon last indefinitely. They are made high or low, any width of tire, to fit any skein. **They can't get loose, rot or break down. They last always.** Catalog free.
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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Ill., Feb. 21.—Fancy white is not plentiful, and sells at 11c.; good No. 1, or grade of that character is abundant, and sells at 7 to 9c.; amber and dark, 7 to 8c. Extracted, white, 5 to 6c.; amber, 4 to 5c.; dark, 4c. Beeswax, 26 to 27c.

Much of the comb honey is granulating this season.

Detroit, Mich., Feb. 1.—Fancy white, 11 to 13c.; No. 1, 10 to 11c.; fancy amber, 9 to 10c.; No. 1, 8 to 9c. Darker grades are selling lower and in better supply ,and can be bought at 6 to 7c. Extracted, white, 5 to 6c.; darker grades, 4 to 5c. Beeswax is in good demand at 26 to 27c.

Indianapolis, Ind., Jan. 15.—Fancy white, 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand.

Milwaukee, Wis., Jan. 24.—Fancy white 1-lbs., 11 to 12c.; A No. 1, 11 to 11½c.; No. 1, 10 to 11c.; No. 2, 8 to 9c.; No. 1 dark, 8 to 9c. Extracted, in barrels, kegs and cans, white, 5½ to 6c.; dark, 5 to 5½c.

The supply of honey is good and the quality very nice as a general thing. The demand is not up to our desires, yet we are hopeful it will improve and all will be wanted at fair value. We feel like sustaining prices, and continue to quote as above.

St. Louis, Mo., Feb. 9.—Fancy hite comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

Boston, Mass., Jan. 18.—Fancy, in cartons, 12½ to 13c.; in glass, 11 to 12c.; A No. 1, 10 to 11c.; No. 1, 9c.; No. 2, 8c.; No. 3, no sale. Beeswax, 27c.

The demand for honey is light on all grades, with a full supply. Pure beeswax is in good demand, but supply is light.

Philadelphia, Pa., Jan. 18.—Fancy white, 10c.; No. 1, 9c.; amber, 8c. Extracted, white, 5c.; amber, 4c.; dark, 3¾c. Beeswax, 28c.

Late arrivals of California honey have demoralized our market.

Kansas City, Mo., Feb. 19.—Fancy white comb, 1-lbs., 10c.; No. 1, 9 to 10c.; amber, 8 to 9c.; dark, 7 to 8c. Extracted, white, 5 to 5 1-2c.; amber, 4 1-2 to 5c.; dark, 4c. Beeswax, 20 to 22c.

The supply of honey is large and the demand light.

Buffalo, N. Y., Feb. 11.—Strictly fancy 1-pound combs are in quite good demand from the fact that it has been so scarce and closely cleaned up, and 11c is quite easily obtained. Other grades do not sell much better, possibly a little, ranging from 9 to 6c., as to grade, etc. Extracted ranges from 4 to 6c., and is in light demand. We can recommend shipping strictly fancy and nothing else, unless you cannot do better.

San Francisco, Calif., Feb. 16.—White comb, 1-lbs., 7½ to 9½c; amber, 4 to 6c. Extracted, white, 4½ to 5c.; light amber, 3½ to 4c.; dark tule, 1¾ to 2¼c. Beeswax, fair to choice, 24 to 27c.

Market is ruling steady for choice to select qualities of both comb and extracted, but more especially for the latter, owing to light stocks and a fair demand, both on local account and for shipment. Increast quantities are expected to be consumed in the course of a few weeks, owing to observance of Jewish holidays. Dark grades are not readily salable, and where custom is secured for this sort, very low prices have to be accepted. Not much beeswax on market, and there does not appear to be the slightest possibility of there being any excess of stock during the balance of the season.

Minneapolis, Minn., Jan. 31.—Market is in an overloaded condition on comb honey. Good chance for fancy white extracted at 5¾ to 6c., but comb is at a standstill, particularly if other than fancy white. Best price available on fancy white comb is 10½c., and buyers are slow at that. Darker grades or broken lots are unsalable. If shippers would send in their extracted when it is wanted, and not push undesired comb [and vice versa] the stuff would move more advantageously to all concerned. The trouble is, when a fair price is obtainable some shippers hold out for more and in the end lose by it.

New York, N. Y., Feb. 9.—There has been a fair demand for comb honey of late, and we are gradually reducing our stock. Fancy white is scarce and finding ready sale at 10 to 11c; off grades white and amber, 8 to 9c.; mixt and buckwheat, 6c. Extracted is in fair demand—California white, 5½c; light amber, 5c.; white clover and basswood, 4¾ to 5c.; buckwheat, 4c.; Southern, 50c. a gallon. Beeswax is steady at 26 to 27c.

Cincinnati, Ohio, Feb. 21.—There is a slow demand for all kinds of honey. We quote 10 to 13c. for best white comb honey, and 3 1-2 to 6c., for extracted. Beeswax is in fair demand at 20 to 25c. for good to choice yellow, with a fair supply.

Cleveland, Ohio, Feb. 22.—Fancy white, 12 to 13c.; No. 1, 11 to 12c.; No. 1 amber, 9 to 10c. Extracted, white, 6 to 6½c.; amber, 4 to 5c. Beeswax, 22 to 25c.

$100

Given as Bounties to purchasers of the improved Danz. Hives and Sections. See schedule in my bee-book "Facts About Bees." Tells how to produce honey that sells for the most money. Free for 2c in stamps. Address
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or F. DANZENBAKER, Box 466, Washington, D. C.

BEE-KEEPERS' SUPPLIES! Largest and Best equipt Factory in the SOUTH-WEST.

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Circulars free. Send 6c. for Illus. Catalogue.
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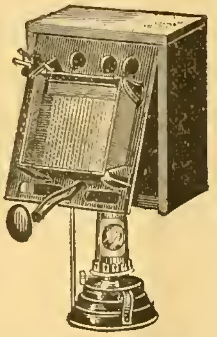
44A26t Please mention the Bee Journal.



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Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

J. P. H. BROWN, Augusta, Ga.
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It is always Pure and Sweet.
It is the kind that does not sag.
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If you once try it you will have no other. Samples furnisht **FREE.** Large illustrated Catalog of all kinds of

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THE W. T. FALCONER MFG. CO.,
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NEW YORK, is the city,
105 Park Place, is the street,
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Who is prepared to ship you, on short notice, **anything** in the apiarian line.

Are YOU the man who wants to buy?

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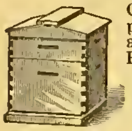

Of Bee-Hives, Sections, Shipping-Cases, Comb Foundation, and **Everything** used in the Bee-Industry.

We want the name and address of every Bee-Keeper in **America.** We supply Dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment.

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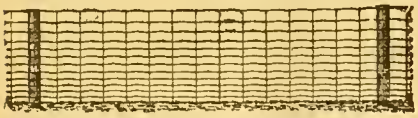

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the material in a 75-cent jack-knife for five cents or less, and make your own knife—but you don't. Think about it when some one asks you to buy a machine and wire to make your own fence "cheap."

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

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Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**
Cash for Beeswax. BELL BRANCH, MICH.

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21st Year **Dadant's Foundation.** 21st Year

Why Does It Sell So Well?

Because it has always given better satisfaction than any other.
Because **IN 21 YEARS** there have not been any complaints, but thousands of compliments.

We Guarantee Satisfaction.

What more can anybody do? **Beauty, Purity, Firmness, No Sagging. No Loss. PATENT WEED PROCESS SHEETING.**

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BEE-KEEPERS' SUPPLIES OF ALL KINDS.

LANGSTROTH ON THE HONEY-BEE, Revised.
The Classic in Bee-Culture—Price, $1.25, by mail.

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We make a specialty of making the very best Sections on the market. The **BASSWOOD** in this part of Wisconsin is acknowledged by all to be the best for making **the One-Piece Honey-Sections**—selected, young, and thrifty timber is used.

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On 1896 Style Hives.

In order to make room for stock of New Goods at our Chicago Branch, we offer the following list of 1896 Hives at these reduced prices to close out quick:

		5	10	20
50 No. 1	8-frame	$5.00	$9.00	$17.00
25 No. 3	"	5.00	9.00	17.00
25 No. 1E, P. W.	"	4.00	7.00	13.00
80 No. 1, "	"	5.00	9.00	17.00
55 No. 5E	"	5.00	9.00	17.00
25 No. 5	"	6.00	11.00	21.00
25 No. 6E	"	4.00	7.00	13.00
20 No. 6	"	5.00	9.00	17.00
40 No. 5E	10-fr.	5.50	10.00	19.00
30 No. 5	"	6.50	12.00	23.00
25 Townsend Section-Presses			50 cts. each.	
13 Wakeman & Crocker Section-Presses			$1.00 "	

Note.—The 1896 No. 5 Hives include a honey-board as well as foundation starters, and the No. 5E have these omitted. The No. 6 have the D section-case arrangement, complete with sections and starters; and the No. 6E the same, without the sections and starters.

Better order at once if you want any of the above list. All are bargains, for they are exactly as well made in every way as our later hives. Address,

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118 Michigan Street, CHICAGO, ILL.

AMERICAN BEE JOURNAL.
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38th Year. CHICAGO, ILL., MARCH 10, 1898. No. 10.

CONTRIBUTED ARTICLES

"Golden's" Disk Whirling-Belt Section-Cleaner.

BY MISS FLORA FITCH.

Dear Mr. York:—We get letters every now and then wanting to know who this "Flody" is. My name is Flora Fitch. Having always lived next door to Mr. Golden, since a mere child, he has always playfully called me his girl, and I have more or less assisted him with his bees, and in the gallery. Through Mr. Golden's kindness I have learned something of the nature and habits of the little honey-bee, as well as some of the mysteries of photography. My father having gone to his long home, my mother, little sister, and myself, make up our family.

And now, Mr. York, as I promist to write for you a description of Mr. Golden's disk whirling-belt section-cleaner, I will now proceed:

The pictures will perhaps tell more than I can explain on paper. The gearing is metal, and revolves on an upright shaft, upon which a disk is set, or taken off, having a mortise on the under side. This disk consists first of a wooden wheel ¾ inch thick by 14 inches in diameter. A hoop 1½ inches wide is tackt around the outside rim, and extends one inch over the disk-board. A piece of good drilling or canvas is wet with starch-water, then ironed smooth. Take a compass and a card-board, make a circle ¾ inch less than the disc wheel, then make a circle 3½ inches smaller than the previous circle; cut out, and you have a pattern. Take two or three sheets of wadding and fold as often as the pattern will cover. Lay on the pattern, and with a sharp penknife cut around outside and inside the circle. Lay the batten on the canvas, and over the batten put a piece of muslin, then baste around the inner circle, after cutting the muslin like X.

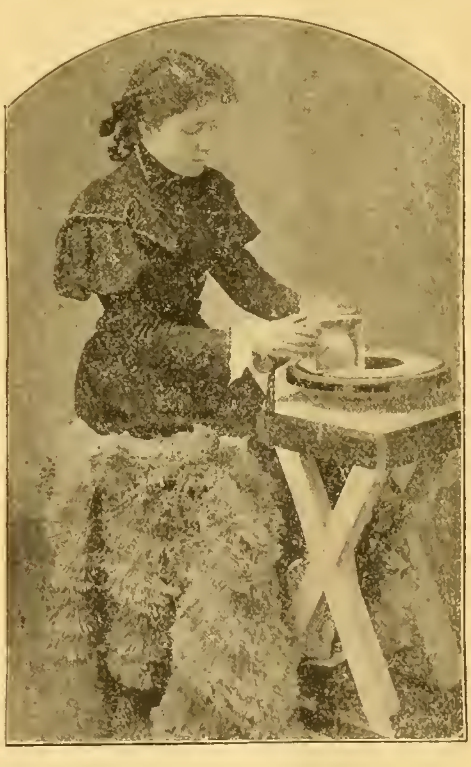
Then baste around the out circle and stitch with sewing machine. Trim, dampen, and run a hot smoothing-iron over, cut the pattern in four pieces, and cut out four pieces of No. 2½ or 3 sand-paper, glue one at a time, and lay on the cushion belt. Lay on a wood separator. Then with a moderately hot iron, press for two or three minutes, and so on until finisht.

Having another hoop, something like a bucket-hoop, spread the canvas over the disk-board, put over the small hoop, pressing it down over the disk-hoop, pulling the edge of the canvas and stretching it tight like a drumhead. Trim, and you have without doubt one of the safest and most common-sense belt section-cleaners yet presented for inspection by bee-keepers.

In testing this machine, we have taken sections having had the combs cut out, and placed over this belt, and quickly made bright and clean, and not breaking a joint. We have taken sections of partly-drawn comb from right out-of-doors in the cold and cleaned them bright, and not a crackt comb could be observed.

You see this belt "gives" under the least pressure, and there cannot be the least jar, no difference at what speed you run the belt, and it is just the same with the other belt machine. Besides, one can work much the speedier, at least that is our experience.

We send you two views, one showing a plain view of the cleaner, and one showing how the arm may rest while holding a section, as the arm becomes pretty tired when working all day. Place the machine near a table, and with a stool high enough to give nearly a standing position is best. I find it much the easiest to take a section in the right hand, and as I place my wrist on the rest (which turns either way on its upright), and as I bring the section in contact with the whirling sand-belt, I take hold with the left hand, thus the section is guided backward and forward, and turned around, until the four sides are cleaned, and then the edges.


The Golden Disk Secion-Honey Cleaner.

But, dear me, Mr. York, don't hold the section on the sand-belt very long, for if you do you will have a lump of honey all in your "two little hands."

So now, Mr. York, when you commence to clean section honey, "do be careful."

Mr. Root said in Gleanings that he had a disk machine in his mind's-eye. (We don't know whether he will have the whirling-belt or solid disk). If a solid, or even a raised, surface on a solid substance, he will undoubtedly find some breakage in his honey. Of course, nice work can be done, for we have had enough experience to know, and also know something about a belt machine, and that is what Mr. Golden, and I, too, want the bee-keepers to know, which is the best and safest.

There is another thing we learned. A light machine somehow, even fastened to the floor, jars more than a heavier one. Now, Mr. Editor, I have told you about the Golden disk whirling-belt daisy section-cleaner. Morgan Co., Ohio.

⁂

Honey for the Alaskan Gold-Seekers.

BY L. G. CLARK.

The various articles and controversies that appear in the American Bee Journal have had my close attention, and tho there is some confliction of ideas and methods of obtaining the same results, there is one proposition upon which all are well agreed, and that is the necessity of extension and building up of the market for honey. The veterans have all made their suggestions, all of which have merit and would obtain good results if properly followed out, and now I wish to propose a plan of extension of market territory which has not yet, to my knowledge, been advanced.

The mining regions of Alaska have, during the past season, taken thousands of tons of California evaporated fruits and vegetables, beans, bacon, etc. The opening of spring will see hundreds of vessels laden with these commodities going northward, and their cargoes will sell for fabulous prices among the famishing Klondikers. Thousands of prospectors will be rushing in, and the amount of provisions necessary to supply that vast region will be enormous. One of the principal articles in every prospector's outfit is syrup. Every company that contracts to take up and supply men agrees to furnish a given amount of syrup. Fat and fat-producing foods are the most necessary articles of diet in that cold region; hence the heavy demand for sweets.

Syrup, as well as all other articles of food and equipment, sell for many times their actual value, and there is no gainsaying the fact that in a country where gold is the cheapest commodity, honey would in every instance be given the preference over the cheap syrups and trash now supplied them. The transportation and commercial companies now controlling that trade are furnishing the cheapest grades of syrup and imitation honey in order that they may gain the greatest possible profits.

There is some talk of necessary legislation by the present Congress on behalf of Alaska, and if a pure food law—a most decidedly necessary one—could be past for the benefit of that country, it would do much towards relieving the honey market. True, California would get the bulk of this trade, but that would relieve the Eastern markets accordingly.

I have read much of late about the United States Bee-Keepers' Union, and there are some who seem to doubt its possible usefulness. Let the Union present the above proposition regarding an Alaskan pure food law, to Congress, and secure its passage. The result would be far reaching and beneficial, and he who could then doubt the wisdom of "Union"-ism would be unworthy of consideration.

Napa Co., Calif.

⁂

The "Lampman" Section-Comb Cutter.

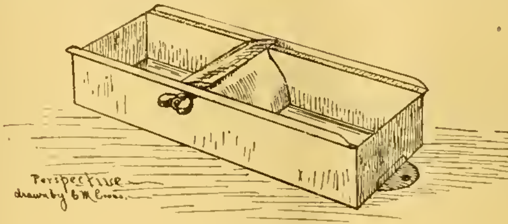
BY H. LAMPMAN.

I am one of those engaged in the keeping of bees for the profits I derive therefrom. I take the American Bee Journal, and of course have seen a good deal said about leveling-down combs in sections. As I have received a good many good things out of the American Bee Journal, I will show its readers what I have invented for the purpose of cutting or leveling down combs in sections of the previous year. I have used it the last three or four years with the greatest of satisfaction. I have tried everything that I ever heard of, besides a great many devices of my own, and to me they were not satisfactory, until I hit upon this device, and it does it so nicely and completely that I thought it would be of benefit to the fraternity.

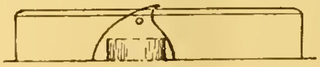
For some reason or another, at the end of the season I usually have a great many unfinish sections, so it is quite an object for me to be able to utilize them the next season. I can get more uniform combs, and just as white appearing. It will be seen by the construction of the cutter that whatever residue of propolis there may be, is entirely separated from the comb, leaving it perfectly clean. After one has a little practice, he can cut down a great many in a day; I never tried to see just how many, but I should judge that 1,000 would be a very easy day's work. Before cutting the combs down they must be perfectly dry, and entirely free from honey. I have no difficulty in producing No. 1 honey from such combs, besides the advantage of getting the bees started in the surplus cases.

The cutter is made altogether of tin, and one bolt. The size, of course, each one will have to regulate according to the size of the section used. The size for a 4¼x4¼ section is 4x10x2 inside the box, with a flange at each side to form the gauge. Cut a hole 2 inches in diameter, 4 inches from one end, and in the center. Put a rim one inch high around the hole inside. Take a piece of XXX tin, 4 inches wide, fold it together, and draw to an edge, using a file to finish up with. Cut a piece like the end of the cutter-knife with a slot hole near the top of this end-piece, so you can raise or lower it, and form the knife around it. Put a hole on each side a little below the gauge on the box. Put the knife in, then a ¼-inch bolt through all, with a thumb-nut to clamp all together.

To use it, get a box that will be about right for you to sit at comfortably in a chair; cut a hole in the end about 4 inches in diameter, place the cutter on so the hole in the center will come in the center of the one in the box; fasten with a screw at each end. Now put water in the box about ½ inch deep. Always be sure to keep water in the box. Adjust a shelf in the wooden box for a lamp to rest on; have the lamp so it will come close up to the hole in the cutter-box. Let it get quite hot. Now sit down with this box directly in front of you, take a section in your two hands, have the knife face from you, place the end farthest from you in the gauge, then lower the other so it will come on top of the knife, then steadily pull toward you, letting it slide off the top of the knife on the gauge. When the section strikes the knife, directly raise that end slowly in such a way as to scrape off any comb that may be there, all the time keeping the other end in the gauge. Reverse, and perform the same act.



The Lampman Section-Comb Cutter.



Sectional Drawing

It takes nowhere nearly the time to do it, that it does for me to explain it. When the wax box gets about half full, let it cool and remove the wax. If the residue collects on the underside of the knife, take an old case-knife and remove it.

All are at liberty to make and use this cutter-box.

Winnebago Co., Ill.

⁂

Instructions for Moving Bees Long Distances.

BY C. P. DADANT.

I have received the following questions which I will answer in the American Bee Journal, as it may help others:

> MR DADANT—I have a small apiary of 27 colonies of Italian bees which I wish to ship from this place (Geauga Co, Ohio) to Kankakee Co., Ill., as early in the spring as possible; and while the books give general instructions but differ somewhat in detail, there are some points I am in doubt about, never having had experience in this branch of the business.
>
> My bees are in two-story chaff hives, and of course tight bottoms. How early in April would it be safe to move them? Would it be wise to put screen cloth over the entire brood-chamber? Would there not be danger in case the weather turned cold (but not freezing) of chilling the brood? Would box cars be as good as stock cars? I notice some advocate stock cars to ship bees, but I presume they have in mind shipping in hot weather. WM. M. WHITNEY.

It is very difficult to give instructions on a subject of this kind and make them fit all cases, but I will try to give, from my past experience, as explicit instructions as possible. There was a time when bees brought a good price and we were selling from 50 to 150 colonies of bees each season, shipping them to all parts of the country. We have shipt bees in closed hives, with only a 4x4-inch opening covered with wire-cloth in the bottom-board, from April 1 till May 15, without loss. On the other hand, we have had great losses from shipping bees with the entire top replaced with wire-cloth, in May, simply from their having too much fresh honey in the hive.

One of the most indispensable requirements in shipping bees great distances is to have but little if any fresh honey. We would, therefore, be sure to ship the bees before fruit-bloom, unless the season was very backward and cold. After a good winter, with populous hives, we would try to ship about the last of March or beginning of April. With two-story chaff hives, all in one piece, as we understand, we would if the colonies were strong, remove the cap or cover and tack a piece of wire-cloth over the upper story. The cap could then be put on or left off, at will, according to the weather. We would use box cars, for there would be but little danger of overheating the bees, and darkness keeps them from fretting if the hive is otherwise uncovered.

If the colonies were only of middling strength, and the time early, say the last of March, we think they might be riskt without any air but the crevices in the cover, provided they had sufficient empty room in the upper story to enable them to cluster away from the brood-combs, if they felt ill at ease. Stock cars are not good to ship bees because they admit too much light. In a closed car, if some of the bees happen to find an opening, they will be compelled, by the absence of light, to remain in the car, and many of them may return to the hive. In an open car, they will be lost at once, the minute they emerge from the hive.

We do not like to ship bees without an opening at the bottom of the hive. As a matter of course, in a double-bottom hive, it is out of the question to give them air in this way. But this may be remedied by a larger opening at the top. We never put wire-cloth over the entrance, because we have often noticed that the bees, being accustomed to flying out at that spot, will fret themselves to death, and their dead bodies will soon obstruct that entrance, so that it might as well be closed. When the air comes from the bottom there is more chance for a circulation. In warm May weather, with single-wall hives, we have often shipt bees by covering the entire brood-chamber with wire-cloth, protected by a board raised two inches above it and cleated on the hive. The cap or cover, which accompanies the hive, is then shipt separately.

We have shipt bees in the hottest weather, in July, by removing half of the brood-combs and replacing them with dry combs, alternating them with the others. In hot weather it is also well to leave a part of the old bees behind. In this way a man may readily leave a small swarm on the spot from which the bees are removed, without injury to the colony removed but rather for its benefit, for a very populous colony will find difficulty in a trip of several hundred miles. If they are confined in too small a space, in hot weather, suffocation will soon take place, the bees seemingly being drencht with perspiration, and the combs breaking down from the temperature being raised above the normal degree of blood heat.

To recapitulate the above remarks, we will say: Ship the bees when the hives are the lightest, but as early in spring as practicable. In cold weather give but little ventilation. If the weather is fair and the colony strong, have an opening either at the top or the bottom. If at the top, shelter this opening with a board cleated above. In hot weather open both top and bottom and remove a part of the brood-combs, or space them so they will not be all together.

Mr. Paul L. Viallon, of Louisiana, who used to ship large quantities of bees from the South to the North every spring, at the time when we were also shipping, told us that he was in the habit of fastening the combs with cleats placed between them so as to avoid breakage. This precaution, which is advisable in shipping single colonies by express, is rendered unnecessary, as in the present instance, when the apiarist loads and unloads his bees himself.

Mr. J. M. Hambaugh, late of Illinois, but now of California, has devised a very good contrivance to give air to colonies when transporting them from place to place. Mr. H. was in the habit of moving his bees to the hills in the spring for the clover and basswood crop, and moving them back to the low lands of the Illinois River in the fall. This contrivance consisted of a light frame taking the place of the super, but only three inches high. This frame which was fitted over the brood-chamber and under the cover or cap, in the same way as a super, was perforated in about two-thirds of its length, on all four sides, with an opening about an inch wide. This was covered with wire-cloth, and a perfect system of ventilation was thereby establisht right over the brood-combs, without the rays of the sun being permitted to interfere in any way with the comfort of the bees.

In transporting bees, the apiarist must use his own judgment, but it is better to give rather too much air than not enough. Yet it is well not to carry the thing far enough to chill the brood, but when the hive is populous the bees are not likely to allow the brood to remain uncovered if there is any danger of its being chilled. They will be sure to do their best to keep it warm.

Let it be remembered, also, that obscurity is best. The rays of the sun are injurious, therefore we object to box cars, except in case of exceedingly hot weather, which is not to be feared in this latitude, even in the month of May.

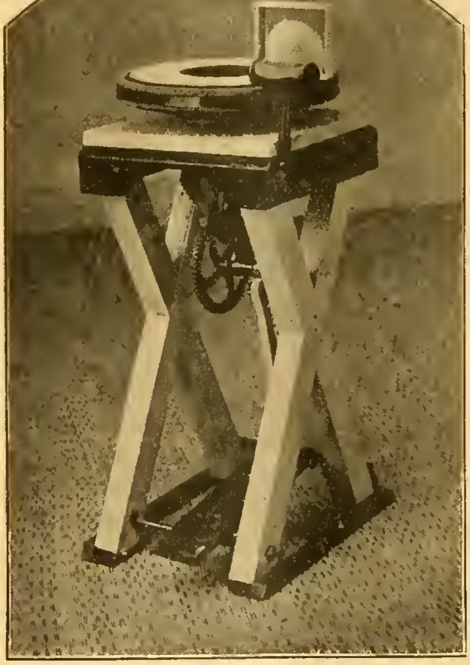
Haucock Co., Ill.

Some Notes from Western Iowa.

BY E. S. MILES.

We have had a nice winter up to the present time (Jan. 15), enough snow for sleighing, and no bad storms or very low temperature. The snow has protected the clover, which notwithstanding a very dry fall now looks as if it would come through in fair condition.

Bees seem to be wintering all right, as they have plenty of good, thick honey to live on. I often read articles condemning the practice of taking the early honey away, and leaving the late-gathered honey for winter stores, but our fall honey is thicker and heavier than clover or basswood honey, and bees have always wintered well on it for me.



Another View of the Golden Disk Section Cleaner.

LARGE VS. SMALL HIVES AND SWARMING.

Out of 25 colonies in 8-frame hives run for comb honey, there were 7 that did not swarm; while out of 4 colonies in 10-frame hives treated the same, 3 swarmed, and the other one was run for extracted honey. So it does not seem to me that the 10-frame hive has any advantage over the 8-frame as a non-swarmer. I have a neighbor who has a colony in a dry goods box, size about 1½x2x3 feet, and they invariably swarm.

I remember last year they were the first to swarm of any in the neighborhood. There is no hive large enough to prevent swarming in this country in good seasons.

MOTH-TRAPS AND CARELESS MANAGEMENT.

I have a neighbor who told me lately that he had a colony of bees with two cases of comb honey entirely eaten by the "worms" last fall; that is, the honey and comb were eaten, and the bees killed. Another neighbor who has had bees more or less for 20 years or more refused the dovetailed hive because it had no moth-trap attachment. It is needless to say that the competition for the home market, or any other market, does *not* come from such as these.

Another neighbor, whom I was helping at threshing, a couple of years since, wanted me to look at his bees. On raising the cap to the hive we saw the combs were attacht to the cover, as there were no sections on, and they had begun at the top and built their comb box-hive fashion. On seeing the combs which were filled mostly with brood, the owner exclaimed, "There, they are at it again—rearing young ones. I just tore the young ones out the other day, and now they are at it again! Whatever shall I do to make 'em quit rearing young ones and go to storing honey?"

It was with difficulty I restrained him from tearing out the combs of brood as he had done shortly before, as I saw them lying around on the ground, for the "old" ones to "lick up."

COLONY ROARING OUT-DOORS IN WINTER.

I would like to ask Dr. Gallup if he hasn't made a mistake about that colony in the crackt hive roaring so loud in such cold weather. He referred to this in one of his recent articles. I never heard of a colony of bees roaring in cold weather so as to be heard a rod or more. I'll leave it to Dr. Miller if it is not a good indication of safe wintering, for bees to remain quiet. Dr. G., I'll bet you've got that crackt hive, and that loud roar, and one of those old-time northern basswood honey-flows mixt a little, somehow or another.

I was puzzled when I first saw those drones. Has our good old tested "queen" of apicultural journals turned drone-layer? Hardly; she has just "boomed" the colony till they are so strong and prosperous they must have a few drones, I suppose. Now, if she doesn't "swarm," won't she make a record? I hope so. Crawford Co., Iowa, Jan. 14.

CONVENTION PROCEEDINGS

Report of the Michigan State Convention.

BY W. Z. HUTCHINSON.

The bee-keepers of Michigan met in Mt. Pleasant, Dec. 31 and Jan. 1. The meeting was called to order on the evening of the 31st, with Pres. T. F. Bingham in the chair, who addrest the convention briefly as follows:

PRESIDENT BINGHAM'S ADDRESS.

I trust I shall be pardoned for not occupying your time with a lengthy address. It has been my pleasure to read the addresses of other presidents during the past year, and I have found them a pleasure and a profit. But in reviewing the season's trend no markt improvements have been tested sufficiently to merit especial attention except in foundation. The so-called drawn foundation has not developt such qualities and experiments as to exclude discussion of them in our convention. The reports and experiments on the no-wall or Michigan foundation I trust will be fully made and discust. No other body has taken such a stand, and it is to be hoped that doubts regarding it will be eliminated, and that it may be reported as a positive success or failure.

One danger threatens our industry, which it will be well to consider, namely, foul brood. It has made its appearance in the East as also in the West. To avoid it is most desirable, and if already existing in this State, we need to know it that we may all guard against its further diffusion.

It would be desirable further to know how this peculiar honey season has averaged in results.

The supposed-to-be-new section without borders may justly and profitably come under your special care.

T. F. Bingham.

H. S. Wheeler—I used a few pieces of the deep-cell foundation, but saw nothing about it that was desirable. I think that more tests are needed.

Pres. Bingham—Bees are not satisfied with any foundation that we can give them. The more walls that we give them the more tinkering is needed to make it over to suit them. If we give them foundation with no walls, there is less still of the tinkering. No one can make the cell-bottoms perfect, so that the bees will not change them over, but the less change that is necessary to suit the bees the better.

Mr. Bingham here showed a super of sections containing partly-finisht combs. One object of its exhibition was to show how straight were the combs—no curling—and the other was to show that the foundation had been drawn out and utilized as soon as a section of partly-drawn comb that had been placed in the super.

W. Z. Hutchinson—Even with the no-wall foundation the bees make a change in the base. First, they change it over to a rounding base, then back to a lozenge-shape, as the side-walls are started.

Mr. Wheeler—Is it not true that the bees first make the rounding shape to the base when building comb naturally?

Mr. Hutchinson—I believe it is. I suppose that if we wish to make foundation that will require the least change we should make foundation with cells having a rounding base.

Pres. Bingham—The flat-bottom foundation can be changed to the natural-shaped base, and it is so changed, but the deep-cell foundation cannot be so changed. The Dunham foundation was fine for use in the brood-chamber. The cells were sound, and the bases very thin, but there was plenty of wax in the side-walls. In the days of the Dunham, wax was low in price and honey was high, and the saving of honey in secreting wax for comb-building was of importance. Now the reverse is true. But the Michigan, or no-wall, foundation will not answer for brood-combs, as it is too light.

The Secretary now read a paper from Mr. L. A. Aspinwall, on the subject of

Comb Foundation—Some Advantages and Disadvantages of the No-Wall Kind.

The changed condition of wax after being subjected to a melting heat, rendering it tough and leathery, becomes an objectional feature in comb foundation; and only through precaution in maintaining the limit of heat necessary in melting is the objection minimized. In addition to this objection, and coupled with it, is impurity. This latter, however, is chiefly propolis, and can be almost entirely eliminated in rendering by using the solar extractor.

Its being soluble in hot water at once commends to us the superiority of sun-rendering over either water or steam; the latter, however, is less objectionable, altho the high temperature (212° at least), together with the attendant condensation, naturally tends to dissolve the propolis and contaminate the wax. Being soluble in hot water, particles infinitely small become incorporated with the wax, the presence of which may be recognized by the greenish shade, which also is proportionate with the amount it contains. The contrast is wonderful when compared with the beautiful yellow product of the sun extractor, as is also its texture, which is rendered hard and brittle in the same ratio.

Inasmuch as wax melts at a temperature varying from 150° to 160°, according to its purity, I would caution all against excessive heat, even in sun rendering. With a temperature over 212° the tendency to soften propolis whereby it becomes more or less incorporated with the wax is much increast. Instead of painting the extractor black, which is a severe strain upon the wood, being subjected as it is to extreme expansion and the consequent contraction, I use white paint both inside and out, obtaining the most satisfactory results.

Altho other impurities, such as pollen and that which naturally results from old brood-combs are found, their elimination is comparatively easy. However, in justice to the manufacturers of comb foundation, I will state that the use of sulphuric acid serves a useful purpose in separating the impurities from wax; still, a means of prevention is always preferable to a cure. Then, again, cleanliness in all the work of sun-rendering is a matter worthy of our consideration; and, being done outside, saves much inconvenience to the inmates of our homes.

The changed condition of wax, to say nothing of impurities, has necessitated much effort on the part of foundation-makers, not only to restore its orignal color, but the softness of its texture. While much progress has been made in this respect, far more satisfactory results have been obtained by reducing the quantity of wax in each lineal foot of foundation.

Altho foundation as first made was heavy, with but little projection or cell-walls above the base, and, in many instances none, Mr. T. F. Bingham suggested to the Michigan bee-keepers, in session last year at Mt. Pleasant, the possibility of producing a very light foundation without the cell-walls. Of course, the changed condition of wax after being melted, whereby it is rendered hard, was duly considered as being objectionable, and the use of a minimum quantity advised, hence, a return to the primitive design.

But the state of the art had advanced—the methods of manufacture had been improved, as well as the foundation itself. An exceedingly thin septum being the result of continued experimenting for years seemed an opportune time for the aforesaid change—not unlike the development of our improved section, in which the plain style, altho first made, is only now being popularized.

The members of the Michigan convention being willing to try the experiment suggested by Mr. Bingham, unitedly paid the amount necessary to procure a mill engraved expressly for the purpose.

In due time Mr. Bingham announced that the mill had been completed, and those desirous of testing the product could do so by procuring the foundation through him; whereupon I ordered some three or four pounds. Upon receiving and examining the foundation I was agreeably surprised to find the product so thin and delicate. However, owing to its smooth angular surface, which was minus the cell-walls, I was somewhat skeptical as to its acceptance by the bees. I expected to see much of it torn down, or transformed into drone-comb. In this respect I was agreeably surprised, it being readily accepted by the bees, and not a single section was found to contain drone-comb.

But the finisht product was far more interesting and satisfactory. The daily test by both Mrs. Aspinwall and myself led us to give it the preference. It requires an expert to detect any difference between it and natural comb. Altho I remarkt to Mr. Hutchinson, when at our home, that it was about equal to the natural product, I also mentioned the tentency to warp, which is quite an objection. In some instances the foundation warpt to such an extent that little or no cell-room was left between the septum and separator at the lower edge or bottom of the section, necessitating elongated cells on the opposite side. Altho the objection is apparently slight, still such combs are never fastened to the bottom of the sections; consequently they lack the plump, well-filled appearance, as well as the requisite strength necessary in transportation.

If we carefully examine the process of comb-building, the added knowledge will enable us to understand why a foundation without cell-walls so closely approximates natural comb in the finisht product.

During comb-building small particles of wax are constantly being welded to the edges of new comb, which is also true of foundation with rudimentary cell-walls. Bees invariably attach the plastic material to the edges, previously reduced to a like condition, in order that the work may be homogeneous throughout. As a natural consequence, the base or septum is scarcely toucht during a good honey-yield. With foundation having no cell-walls, the angular bases must first be operated upon by the bees, and rendered sufficiently plastic to retain the new particles of wax. This process practically renews the entire base, inasmuch as the angles of both sides necessitate much closer work than we would naturally expect.

While this process of renewal or rendering the angular surface plastic is productive of comb equaled only by the natural, it also causes the warping already alluded to, especially when the sides are operated upon unequally.

In all lines of progress, however, with a point gained we are likely to encounter a corresponding evil. But inventors wear them away. By fastening the foundation on three sides, the objection would be overcome, altho a lesser one (that of fastening) would present itself.

Altho I do not like divided sections, which, by clamping, secures the foundation, still I think some method should be devised to supersede the use of hot plates or melted wax, if possible.

In all probability we shall not experience a honey-yield for some time which will fully equal that of last season. Under the circumstances of a poor yield, the Michigan foundation might prove a failure. Certainly, 1897 was exceptionally favorable to the acceptance of any artificial base. During times of failure bees, like individuals, are wont to be employed, and will tear down the artifice of men's hands rather than remain idle. L. A. Aspinwall.

Mr. Bingham had used the no-wall foundation quite extensively, and, as already mentioned, had a super on exhibition. The super was not a selected one, and was taken right from the hive, as shown by the propolis. It was necessary to use a knife in prying the sections loose. A Mr. Robinson had used about 10 pounds of this style of foundation. It workt very well until the flow of honey slackt up, then the bees gnawed down the foundation.

Mr. Wheeler—I had trouble last year with the bees gnawing out the Van Deusen foundation.

Pres. Bingham—I used the no-wall foundation altogether last year. It runs from 17 to 18 feet to the pound. We were all delighted with the honey. Not only this, but there was a saving of some $7.00 or $8.00 in the cost of foundation, over what it would have cost to use ordinary foundation.

After dinner of the second day the convention took up that part of the President's address relating to

FOUL BROOD.

Mr. John N. Rankin, who has charge of the Michigan Experiment Apiary at the Agricultural College, read the Michigan foul brood law, which appeared on page 633 of the American Bee Journal for 1897.

Pres. Bingham—Foul brood is spreading, and something ought to be done to prevent its spread.

Mr. Hutchinson—That law that Mr. Rankin has just read was drawn up by Prof. Cook a good many years ago. At that time it was probably a good law. Foul brood and the methods of getting rid of it were not then so well understood as they are now. A person of ordinary intelligence, who will be careful and thorough, can get rid of foul brood without much loss, and it is an injustice to compel a man to burn up his colonies when the hives, bees and wax, yes, and the honey, may be saved. I do not know the text of the law in Ontario, Canada, but it allows the owner or the inspector to get rid of the disease.

Pres. Bingham—There are a great many careless, incompetent bee-keepers, and if we allow one to attempt a cure, we must allow all the same privilege.

Mr. Rankin—I think that we ought to be allowed to cure it.

R. B. Oldt—Foul brood can be easily gotten rid of. A swarm hived in an empty hive will be free from the disease. A colony or swarm driven out can be hived the same way, and will be free from disease. The old colonies can be united, and when the bees have all hatcht they can be driven out and treated as a swarm. The old combs can be melted into wax.

At this point Mr. Rankin read a paper showing

What Has Been Done at the Michigan Experiment Apiary.

When I consented to give a paper on the work at the Michigan experiment apiary, I did not at the time realize how little had been done.

The bees were taken from the cars May 19—21 colonies in all. As soon as these were examined they were united down to 12 fair colonies.

Every bee-keeper knows of the time, labor and expense required to start an apiary, and how little chance there is to do any practical work the first year. We requeened the 12 colonies, and at present have 17 tested Italian queens in our yard, as well as several pure home-bred ones.

There are certainly many difficulties in the path of the Michigan experiment apiary. Finance is perhaps the greatest one of them all. The old bee-house has been turned into a dwelling, and is now occupied by one of the professors, so another house had to be fitted up. We will hope, however, that this is only temporary, and will soon be replaced by a better one.

The only equipment that was on the grounds was a lot of old-style hives of different makes, so new fixtures had to be bought. The stock is not complete yet, but will be when next season opens.

The director of the station has certainly been very fair with the apiary department, and has given it as much attention as he does the other departments. He has granted everything that I have insisted was a necessity. He is interested in the department, and wishes to see it prosper.

Of course, we can't expect to get a whole outfit together in one year, but the future certainly looks good.

It would be a great step towards success if practical bee-men took more interest in the work of the station. If you are interested, let the director know about it. We have had a great many letters from farmer bee-keepers, and they are very much interested.

An experiment was made to test the drawn and thin foundation the past summer, and it was certainly a very interesting one. It was too late to test them in the honey-flow, so we fed back. They proved to be of about equal merit. A result of this experiment can be had by applying to the apiary department of the station.

An effort was made to unravel bee-paralysis. We procured two queens from the apiary of T. S. Ford, of Mississippi, from colonies that were affected with the disease, and introduced them to healthy colonies. These are ¾ of a mile from the apiary. Through the first part of November one of them showed slight traces of the disease, and when spring opens we may find that we have the desired results. However, there is nothing certain about it as yet. We are wintering these two colonies on the summer stands packt in chaff. The remainder are in the cellar.

We have had many inquiries about foul brood, from farmer bee-keepers, asking how it looks, how to get rid of it, etc., and what laws there are for their protection. There is only one law in Michigan for the protection of bee-keepers, and this one is in the Public Acts of 1881, page 125. It provides for a foul brood inspector. It does seem a pity that a disease as well known as foul brood should be constantly gaining ground, as it certainly is in some parts of Michigan.

It has always been one of my desires to breed a strain of bees with a tongue long enough to reach red clover, and we began this systematically the past season. The average length of bees' tongues in our vicinity are: Black, 4.2 m. m.; hybrid, 4.9 m. m.; and the Italians, 5.3 m.m. The ordinary bumble-bee has a tongue 8.3 m. m.

We made one direct cross, or an in-cross of one colony, and the bees from this cross have a tongue 5.5 m. m., an increase in length of 1 m. m. over the parent colony. I have not told you about the unsuccessful attempts—there were very many, more than our successes. If we could control the mating of queens we would, I think, be certain of success.

We have tried clipping the ends of the queens' wings, and in every case the queens were not fertilized. The ordinary red clover corolla-tube is from 9 to 10 m. m. long, so we still have a tongue 4 m. m. too short. When the tube fills with nectar up to 4 or 5 m. m. from the bottom, as it sometimes does, our bees work on it quite freely.

We have had no encouragement in this line. Some of the men with whom I have talkt shake their heads and say, "Impossible." But we are going to stick to it, as I think it is worth trying.

Follow up the history of any live stock—swine breeding, we will say—the old Chinese and Siamese hog of 1750 does not resemble very closely the neat, well-flesht Chinas or Berkshires of to-day, and yet they are descended from them. To be sure, their tongues have grown shorter, but they have been bred that way.

I would say in conclusion that the outlook for the Michigan experiment apiary is good. What we need most of all is the hearty co-operation of bee-keepers to educate the State Board to know that ours *is* an important industry, and that it needs and deserves a good, well-equipt apiary for experimental purposes.
JOHN M. RANKIN.

Following the reading of the foregoing paper was an informal talk which showed that there was a feeling that there is a need for a change in the Michigan foul brood law. Mr. Hutchinson suggested that possibly the treatment of foul brood might come under the jurisdiction of the Live Stock Commission, but, of course, a change of law is needed. Too many preliminary steps are now necessary. There is also another point, altho a minor one, viz: If one makes complaint of there being foul brood in a certain apiary, and it turns out otherwise, the expense of the examination falls on the complainant, and some will hesitate on this account about making a complaint. A resolution was finally past empowering the Secretary to see what steps were necessary to secure a revision of the law, or to have the matter of foul brood lookt after by the Live Stock Commission.

Mr. Oldt here gave his plan of wintering bees. He first had hives with straw around them. The bees were dry and warm, and bred up well in the spring. Then he changed and used chaff on the outside and packt the hives, two in a box. He noticed that the bees crowded up on the side of the hive that was next to the other hive in the box. They did this in both hives. Then he thought that if two are benefited in this way, more would be better yet, so he put 10 hives in one box. Now he puts all of his hives in one long row on the north side of his apiary, surrounding them with boards and chaff. He sets the hives two deep; that is, there is one row above another. He packs heavily at the sides and back, but not more than four or five inches in front. There is one objection to this style of wintering, and that is, if the bees fly in winter there is likely to be some mixing up of the bees from one colony to another. He says that with this method of wintering, the bees consume as little honey as with cellar-wintering. He puts a two-inch rim under each hive.

Mr. Mead—I winter the bees the same, only I pile straw in front of the entrances.

Reed City was chosen as the place for holding the next convention; and Hon. Geo. E. Hilton was chosen President; L. A. Aspinwall Vice-President; W. Z. Hutchinson Secretary, and John M. Rankin, Treasurer.

W. Z. HUTCHINSON, *Sec.*

Report of the Northwestern Bee-Keepers' Convention, Held in Chicago, Nov. 10 and 11, 1897.

REPORTED BY A SPECIAL BEE JOURNAL REPORTER.

(Continued from page 134.)

SECOND DAY—FORENOON SESSION.

SOME SWEET CLOVER QUESTIONS.

"What is the average yield of sweet clover seed per acre?"

Mr. Baldridge—I never knew so definitely till this year. I gathered several hundred pounds of seed myself this year, to have it perfectly free from weeds. On 3/5 of an acre we got 202 pounds of seed in the hull. This seed was cut in the city of St. Charles, Kane Co., Ill., on some vacant lots, and the ground was thoroughly covered, and it was a good, fair crop.

Pres. Miller—The next question is, "Ought it be hulled?" The imported seed is all hulled; the domestic is all unhulled.

Mr. Baldridge—For home use I think it ought not be hulled. If it were used for coloring purposes, as it is in Germany, I understand, or for oil, then of course it should be hulled.

Pres. Miller—For seed, unhulled.

Mr. Whitcomb—I bought some that was not hulled, and I don't think that one seed in a hundred grew; and since then we have been sowing the hulled seed, with very great success.

"What does a bushel of unhulled seed weigh?"

Mr. Baldridge—35 pounds is what is allowed for a bushel of unhulled seed, but it won't weigh over that unless it is very plump and very clean.

Pres. Miller—Will you tell us the best time to harvest the crop for seed?

Mr. Baldridge—The best time I have found to harvest it is before it will scatter any, and that would of course be in the dough state. It should be cut green. If it gets to be dead ripe, the seed will not be as plump, and not weigh near as much, and will not be as good. If you cut it green put it in little piles, and let it remain at least a week, until it is thoroughly cured, and put it in the piles so that if it rains you will not have to turn the piles over—about as large as a sheaf of wheat—and then thresh it where you cut it, and don't undertake to haul it. Put it on a sheet or a large blanket—I use sheeting. Put it on and strike it a few blows with a stick. You don't need a flail. I had one made on purpose, and I don't need it. A broom-stick is just as good to thresh it as the best flail ever made. A few strokes will drop out all the seed. That is the simplest and best way I know of to gather it. Cut it with a corn-knife, so as to pile it straight as you cut it. If you cut it green you will lose no seed. If you cut it in the dough state it won't shell any. I generally use a sickle. It is slow work to gather it. It is worth more than some ask for it, to gather it properly.

BEE-KEEPERS' UNION AND SWEET CLOVER.

"Should the Bee-Keepers' Union assist any of its members in a litigation in regard to sweet clover, in a case of trespass and damages simply? If so, why?"

Sec. York—What Bee-Keepers' Union does the questioner mean, the National or the United States, or any bee-keepers' association? It seems to me if the Bee-Keepers' Union is organized to defend or protect its members that it should help a bee-keeper who is prosecuted, or persecuted, in that way. I should say that it ought to help the member.

Mr. Baxter—I believe the National Bee-Keepers' Union was organized to protect the bee-keepers in their rights, and it doesn't seem to me, whether it is removing bees outside of the city limits, or whether it is cutting down the flowers on which they feed, it makes no difference—it is always of national interest—of interest to everybody. I believe it is just as vital a question as removing bees outside of the city limits, or anything similar.

Mr. Baldridge—In a case of trespass a man might come upon my premises and harvest my potatoes or my corn, or anything else, and I am a bee-keeper, I am a member of the Union. Is it the duty of the Bee-Keepers' Union to assist me in protecting my corn crop against the doings of some officials? I think not. If the question was to decide whether a man had a right to grow sweet clover upon his premises, that is another question. This is simply a case of trespass.

Mr. Baxter—The State of Ohio past a law prohibiting the growing of noxious weeds on premises, and appointed the highway commissioners to see that all such weeds were destroyed, and I understand that sweet clover was included as one of the noxious weeds, and, such being the fact, the highway commissioners entered upon certain land and destroyed sweet clover; and the gentleman whose clover was destroyed turns around and sues those gentlemen for trespass. Such being the case, the question arises: Is sweet clover a noxious weed? And if so, has the State a right to pass such a law as that? If it has, then there is no trespass. If it has not, then the trespass will stand.

Mr. Baldridge—I notice that Mr. Baxter is misinformed. That is where the gist of the matter comes in. The law was repealed before the sweet clover was toucht.

Mr. Whitcomb—It seems to me that our Savior settled that question when he said, "Help ye one another." I understand that the United States Bee-Keepers' Union is not prosecuting this case, but that individual bee-keepers are giving their testimony in this case at the suggestion of Dr. Besse, and it has been rather more a pleasure to me than a duty, to help him out with what I have known about sweet clover, and about its not being a noxious weed or anything of the kind. We find farmers all over the country, not bee-keepers, who assert that this is a noxious weed; and I have for four or five years made in my State a public offer of a hundred dollars to any man that would furnish authentic evidence that sweet clover has ever encroacht on well-cultivated land anywhere. If any of you Illinois people want that $100, furnish evidence and you can have it. It is simply an impossibility. The nature of sweet clover is foreign to its encroaching on cultivated land. It simply cannot stand it. If you can run a mower over your sweet clover plants you will kill it all. It cannot stand pulling up. It does not grow like other weeds. It is not a weed. It is a grass, and belongs to the alfalfa family. You will find it valuable as a honey-producer, as a forage-plant, relisht by hogs, cattle and horses, and by everything. It is true that in the spring of the year stock not accustomed to it do not take to it readily. I would like to help Dr. Besse in this matter. I think he has been wronged, and ought to have justice, and if I could do anything personally to help him or any one else in that position I would like to do it. It is a pleasure and not a duty, and it has been my nature all along through life to have a little sympathy for the under dog in the fight; I can't help it, and I think it will always be so.

Mr. Stone—I believe the time will come, and it has in every neighborhood where sweet clover is an old plant and understood, when we will be entirely let alone. The trouble with sweet clover is, it springs up so suddenly that the farmers are all alarmed. In my neighborhood I have had almost every farmer that I know ask me what that awful weed was, and when I tell them it is a species of clover, it seems to satisfy them a little while; and one man that askt me about it said to me, "Why, that is an awful weed, and I am told it will go 20 feet into the ground." That is not so at all. But still I let him believe it was, and I said, "I don't care if it goes clear down to China; it will bring fertility from the other side of the world; it dies in a year, and then I will have a hole clear through to the other side of the earth"—and we laught it off. The next spring I saw him digging up plants along the roads to take home and set out. We have only got to stand it for two or three years, and the sweet clover will be in, and they will forget what a thing it is. If it were an awful thing they will forget what it is, but when they find it is beneficial they will want it. I don't look for any trouble at all.

(Continued next week.)

BEEDOM BOILED DOWN

Lots of Brood-Chamber Room.—The editor of Gleanings says he will again, this year, as he did last, use two-story, eight-frame hives in his out-apiary, even for comb honey.

Kind of Bees.—Have your queens mate with drones as distantly related as possible; use queens closely related to imported Italian stock for extracted honey, and Golden Italians for white cappings, is the advice of G. M. Doolittle, in Gleanings.

Is a Colony an Organism?—Editor Lehzen, of Centralblatt, considers the controversy that has been going on with some heat in Germany as to whether a colony of bees is an organism or not, as useless. He seems to think time and ink can be better spent in matters of practical importance.

Who Shall Keep Bees?—This question is discust by Dr. Miller in Canadian Bee Journal, and he seems to have difficulty in coming to a conclusion. A publisher of a bee-journal will want bee-keeping in the hands of those who keep enough, say 20 colonies, so they will want a journal specially devoted to bee-keeping. The bee-keeper with a hundred colonies thinks it a bad thing to have half a dozen colonies scattered here and there—knocks the bottom out of the market with poor honey and low prices. But considering the farmers whose flowers are to be fertilized, and general public whose tables are to be supplied, in the final analysis the question comes, "What is the best way to get bees evenly distributed all over the land, and to have an abundant supply of honey at so low a price that it may be an article of daily consumption on the tables of the great middle class, and that it may even be many times enjoyed by the poor?" Prof. Cook, a fair man and a friend to farmers, advises a return to the old plan of having a few bees on every farm. But how can that be done? What stopt the farmers? And if there were no large apiaries now, would any more farmers keep bees? If they will not, then it may be a good thing to encourage some one person in every few miles to keep a number, and leave the matter largely in the hands of the specialist. A still better way may be to instruct the coming farmers so that they may desire to make bees a part of their farm stock.

Puts Bees Out Early.—N. D. West, a New York man who owns 500 colonies, cellars his bees. They had a flight Nov. 18, he relates in Gleanings, and he got them in as soon as possible after that. He will put them out the last of March or by April 1. He doesn't wait for a warm day, but has some anxiety about the weather the day of their first flight. If a soft snow should be on the ground many will be lost. After the first flight the queen will supply all the eggs the bees can care for, and there will be young bees on hand before time for much pollen-gathering. When taken out on a fine day he finds many bees will get into the wrong hives, filling some to overflowing and depleting others. Some successful bee-keepers, however, leave their bees in till fairly warm weather comes in April.

Disturbing Bees in Winter is vigorously objected to by C. P. Dadant, in Busy Bee. Bees leave the cluster to learn the danger and are chilled. The trouble is worse in the cellar, bees being more alert in temperate atmosphere, hundreds roaming about and leaving the hive, the least ray of light attracting them. But there's a time for all things, so he thinks there's a time for disturbing bees. It's when a warm day comes, and the bees haven't found it out because in a shady place, in a hive with thick walls, or for some other reason. At such times they *must* be waked up to get the benefit of a flight. His bees in chaff hives remain quiet till he wakes them up, when other bees are having a good flight.

Moisture of the Atmosphere in its effect upon hives should be considered in weighing, if false conclusions are to be avoided. An empty hive that had stood out with other hives till Oct. 15 was then put into the cellar, and in 5½ months it gained in weight 2¼ pounds. Set in the open air, it lost more than a pound in two days. There is possibility of deception in another way, when weighing colonies in hives. A hive is weighed on a certain date, then a long cold-spell comes, at the close of which there is found no falling off in weight. Yet there has been a heavy consumption of stores, the loss of weight in honey being now partly shown by the matter loaded in the intestines of the bees.

Getting Bees Out of Box-Hives.—The opinion seems to be gaining ground that it is not best to transfer before swarming-time. The British Bee Journal has strongly advocated the idea, and the Busy Bee seems of the same mind. It advises: "Wait till box-hive colonies swarm; put the swarm on the old stand, set the old hive 10 feet back with entrance reverst, next evening set old hive close to swarm, facing same way, and a week later set in new place. Let the old hive alone till another swarm comes out, and then treat it in the same way again." But please, B. B., in how many cases would that old colony swarm again?

Winter Loss of Bees.—M. Devauchelle says: "I often smile when I hear bee-keepers say that, on a visit to their bees in March, they found only a small loss in bees—those on the bottom-board. They take no account of the bees that have been carried out dead each fine day, nor of the many bees lost in their flights. A colony will do well, if in March it has lost only a fifth, a fourth, or even a third of the bees it had at the beginning of winter."—L'Apiculteur.

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1 00 per Annum.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Pure Food Congress Delegates, Hon. Eugene Secor and Rev. E. T. Abbott, past through Chicago Monday, Feb. 28, on their way to Washington, D. C. We were able to spend a few hours with them before they took the 3:30 p.m. train leaving for the East. We shall look for some interesting reports from the New Union's delegates, upon the completion of the work of the Pure Food and Drug Congress. With the enactment of a strong national anti-adulteration law, the New Union can begin to make it uncomfortably warm for honey-mixers. In the meantime bee-keepers should continue to become members, so that a well-backt organization will be ready to push the battle to the gates.

◆

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for $1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at $1.00), and 10 cents extra.

◆

Bees and Peach-Trees.—The Florida experiment station isolated two peach-trees, exposing one to a colony of bees during flowering-time, and preventing all access by bees to the other. Both trees set their fruit properly, but the one to which bees had no access dropt its fruit when the stone was forming, while the other retained and matured it. Score another one for the bees.

Color and Taste of Some Sorts of Honey.—Tony Keller, in Luxembourg Bztg., gives description of a number of sorts of honey. Linden varies greatly in color—water-clear, clear yellow, quite green, even dark green, greenish gray, or greenish yellow; very solid when granulated, sometimes almost snow-white. Locust varies from water-clear to deep green, of delightful flavor and odor, thick, and granulating very solid. Apple blossom, clear yellow, pleasantly aromatic. Cherry, clear golden yellow, pleasant odor. Horse-chestnut, thin, transparent, generally colorlesss, sometimes yellowish. Sweet chestnut, dark, and almost offensive in taste. Asparagus, greenish and unpleasant. Rape, mostly a strong aroma, reminding of the blossoms; varies in color, mostly intense yellow; very sweet, many times without odor or flavor, but commonly aromatic, and tasting of the combs, thick, granulating rapidly in cold or light, when it is solid and yellowish white. Mustard, many times completely resembles rape, and is easily recognized by the sharp taste and aroma of this flower. Onion and fennel honey easily remind one of their origin. Heather is reddish, of powerful flavor, with the strongest aroma of all honeys, very thick, granulates slowly, distinguishing itself from all other honeys by its jelly-like character.

◆

Section-Honey Cleaners are attracting much attention now. Several have already been illustrated and described in the bee-papers. And this week we show another—the second one gotten up by Mr. J. A. Golden. Doubtless by the time they will be needed for use this year, several more designs will be evolved by various inventive geniuses.

Miss "Flora" has done well in her description on another page. What a mercy it is to her that we don't publish post-office addresses in full in the Bee Journal. Why, if we did, after giving her latest photograph, as we have on page 145, she would have to sit up nights to read all the letters that young bee-keepers would be writing her! But she has told in a very nice way who she is, and how she and her Golden friend work together.

◆

Referring to Amalgamation of the two Unions, Editor Hutchinson, of the Review, said in his February issue:

> "I feel sure that if the matter could now be put to vote, that amalgamation would be carried unanimously. What is there to hinder such a vote being taken?"

We presume a vote could be taken at any time that five or more members of the Old Union requested it, and provided the request met with the approval of the Advisory Board. We doubt not it would carry all right were nothing further said to prejudice or unduly influence the membership against consolidating the two organizations.

◆

The California Bee-Keepers' Exchange includes 200 honey-producers as members, and handles about one-fourth of the honey-product of the State. So we learn by a report. We should say that is a fine showing for its age. Doubtless in a very few years the Exchange will easily control the annual total output of California honey. Bee-keepers should co-operate with it in every possible way, for its success means greater success for all its membership.

◆

For Sore Eyes.—Thoroughly dissolve in a teaspoonful of warm water a few drops of extracted honey. Four or five times a day drop three or four drops of this in the eye. If some remains on the eye-lid, remove it after a few minutes, without rubbing or wiping hard. A few days will cure.

◆

Exports of Beeswax.—During the year 1897 it is reported that the exports of beeswax from New York amounted to $30,262, or about 120,000 pounds, at 25 cents per pound.

BIOGRAPHICAL

WILLIAM JAMES CULLINAN.

It becomes my painful duty to chronicle the demise of another able and well known member of the bee-keeping industry, W. J. Cullinan, who died at Quincy, Ill., Jan. 17, 1898. He was born in Mt. Sterling, Ill., and at about the age of four years his parents moved into the country nearly eight miles north of the city, where young William attended the district school near by. Here he gained distinction as a leader in all oratorical and literary contests. He was the sixth child of eight, three of whom have preceded him to the Other Shore.

When William was but 11 years of age, he lost his father, and had to assume the burden in a large degree of the farm and consequent work, taking from him the advantages of a more thorough education.

About the year 1885 the farm was sold, and Mr. Cullinan, with his mother and family, again removed to Mt. Sterling, where he embarkt in the harness business, and bee-keeping as a side-issue. About this time he was married to Miss Myra Moran.

W. J. Cullinan.

Mr. Cullinan will be remembered as a frequent contributor to the bee-periodicals during the years 1885 to 1895, his articles being terse and to the point, showing him to be a man of culture and a deep thinker. Bee-keeping was his favorite occupation, but a chain of adversities darkened the horizon of his future, and held in check the realization of his ardent hopes. He was frail from his boyhood, having heart-trouble, which threatened his life at times.

In the course of a few years three children were born to Mr. and Mrs. Cullinan, a daughter and two sons. In the spring of 1892 Mr. Cullinan's mother died, and in 1894 his youngest son, Louis, a bright, winsome baby, nearly one year old, was taken, leaving a desolate home and aching hearts; and in the winter of 1895, Georgie, the only remaining son, nearly four years of age, past from earth. It seemed that Mr. Cullinan and his companion in sorrow had their cup filled to the brim. Their brightest star had set, and all seemed a blank. Their Christian fortitude, however, came to their rescue, as it always does to those who put their trust in Him, and they were content to know there were two shining lights across the way to guide them to that better world.

Nearly eight years ago Mr. Cullinan became a resident of Quincy, where he resided thereafter. There, under many difficulties he resumed his favorite avocation of bee-keeping, his apiary being a model one, and tho not numbering above 40 colonies, they were equipt in the highest standard of excellence, both as to quality of bees and improved appliances. His articles were mostly written from there.

Mr. Cullinan's health had been on the decline for many months, hence his final departure was not without warning. He was a devout member of the Catholic church, and early in his sickness he set his house in order. He was surrounded at the last with many kind, sympathetic friends, two sisters, a loving wife and only daughter. His bereaved wife and only remaining child have the heartfelt sympathy of all who know them. A kind and loving husband and father has been called, but with the blessed assurance that all things needful were given him, his spirit being cleansed in the blood of an atoning Redeemer, he awaits with outstretcht arms for the blessed union that can never separate, on the banks of the eternal river. His body was taken to Mt. Sterling, where it was tenderly laid in the silent tomb beside his little boys, who preceded him to the spirit land.

J. M. HAMBAUGH.

THE WEEKLY BUDGET

MR. LEWIS SYLVESTER, of Kane Co., Ill., called on us last week. He reports for 1897 a spring count of 14 colonies, increast to 35, and a crop of 1,600 pounds of comb honey and 300 of extracted, mostly from white clover.

MESSRS R. H. SCHMIDT & Co., of Wisconsin, writing us Feb. 28, had this to say about their bee-supply trade:

"Business is rushing. We have just completed our new factory, which covers 4,000 square feet of floor space."

MR. C. THEILMANN, of Wabasha Co., Minn., wrote us Feb. 24:

"Bees seem to be all right; no signs of diarrhea as yet. We have about one foot of snow and fair sleighing. Snow drifted badly. Temperature is moderate."

MR. FRANK RAUCHFUSS, Secretary of the Colorado State Bee-Keepers' Association, reports that they have now 60 members, and expect soon to have 125. That will then be the largest State bee-keepers' organization in existence, we believe.

MR. T. F. BINGHAM, of Bingham bee-smoker and honey-knife fame, writing us Feb. 23, reported that they could hardly keep up with their orders for smokers and knives. Bingham's goods are known the world over for their honest worth to bee-keepers.

MR. EUGENE BELDEN, a gentleman who for two seasons has been in the employ of the Inter-State Manufacturing Co., of Wisconsin, called on us last week. Mr. W. H. Putnam is the President of the company, and they are prepared to do a large business in bee-keepers' supplies. Of course, their advertisement runs regularly in the Bee Journal.

MR. W. NORMAN, of Shawano Co., Wis., dropt in to see us March 1. He is getting on nicely with his bee-keeping, tho having begun only two years ago. He will succeed. Mr. Norman had the misfortune to lose his grist-mill by fire recently, causing a net loss of about $4,000. Fire uncontrolled is a fearful destroyer.

MR. J. S. SCOTT, of Utah, referring to the Langstroth Monument Fund, wrote us Feb. 20:

"I arise to second Mr. N. Cameron's motion (page 104), and will guarantee for myself and one other to make two of Mr. C.'s 100 or 500, as the case be. Like Mr. Cameron, I do not wish to buy a cheap stone to mark the resting-place of our beloved Langstroth."

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Bee-Cave too Close and Cold.

I have nine colonies wintering in a cave. On entering the bees are quiet but soon raise quite a hum. The cave is moldy; what is the cause, and what is best to do about it? There is nothing in the cave but the bees. The thermometer stands between 30 and 40 degrees. NEBRASKA.

ANSWER.—Probably the cave is a little too close, and very likely a little too cold. When you open the door you let in fresh air, and the bees make a stir to get their share of it. The thing to do is to let them have more air and more heat. Much easier said than done. If you could have a stove it would be good, but don't use a stove of any kind that will allow smoke or gas to escape in the cave. Making the cave warmer will of itself help change the air without doing anything else, but if that doesn't seem sufficient, you can leave a crack somewhere for more ventilation. The great trouble is to get enough ventilation without making the cave too cold. If your thermometer is correct, it ought to stand at about 45 degrees. If you can't have a stove, hot stones, jugs of hot water, or something of the kind might be used. Even a temporary warming up will help. But don't use hot water unless corkt tight.

Using Hives in Which Bees Died—Foul Brood.

1. During a long spell of very cold weather this winter, three or four of my colonies of bees in dovetailed hives died, leaving considerable honey in the brood-frames. Will it be all right to hive new swarms in those hives after cleaning out all dead bees, or would it be better to take out the comb and make the new swarm commence new?

2. What is "foul brood?" What causes it, and how could I detect it in my bees? CALIFORNIA.

ANSWER.—1. Those combs will probably be a great help to a new colony, and will be all right to use.

2. Foul brood is a disease caused by a microbe or bacillus (bacillus alvei), the disease affecting the larvæ. The most prominent feature depended on, perhaps, in detecting the disease, is the ropy character of the rotten larva when a tooth-pick is thrust into it and withdrawn. The first intimation you are likely to have is the bad smell, holes in the center of the capping of the brood, and the coffee-color of the dead larvæ lying not at the bottom of the cell, but at the bottom-side of the cell. It may be worth your while to get Dr. Howard's book on foul brood.

[We mail this book for 25 cents.—EDITOR.]

Cleaning Hives—Moving Bees—Taking Bees Out of the Cellar—Mice and Bees.

1. Would you advise transferring bees, in the spring, from one hive to another, and so on until all are changed, in order to clean the hives? My hives have the fast bottom-boards.

2. I had my bees on the north side of a slope facing the south in the sun. I am thinking of moving them a few rods north in a small orchard, and face them to the east. What do you think about it?

3. Do you think it best to take bees out of the cellar quite early, or wait until it warms up well?

4. Do mice bother bees in the cellar enough to hurt them much? There are a few mice in my cellar. I have a trap set for them. IOWA.

ANSWERS.—1. An excellent plan.

2. Probably it will be better, but you can't always tell till you try, and sometimes it's hard to tell after you try.

3. I think I wouldn't take them out till soft maples are in bloom, and not then if it didn't promise good weather. Some, however, favor taking out early as possible, and I wouldn't like to be too positive about it.

4. When you open your hives in the spring and find great holes gnawed in the nice brood-combs, you'll think mice are a good deal worse than you supposed. Next winter have the entrances closed with wire-cloth, three meshes to the inch.

Melting Comb Honey by Steam—Crushing Comb Honey.

1. Would it be practical, without injury to quality of honey, to melt honey-combs in a large tank by a steam-pipe? Bee-keepers here have frequently a large amount of candied honey in the spring from colonies that died the previous winter, that they wish to melt up, and frequently use the sun extractor, which injures the color of the honey for selling. Steam would reduce it quickly without doubt, but whether the honey would be discolored or otherwise injured, is what I wish to know.

2. Mr. Aikin writes about the feasibility of crushing honey by running it through wooden rollers. Now, could honey be run through rollers successfully, and has it ever been tried? A party here has some 50 box-hives for transferring, and after the brood is disposed of, he wishes to crush the combs in the easiest manner possible in order to save the honey, and not be so long as it would take him in using sun-extractors; and at the same time he does not wish to discolor the honey. "OUT WEST."

ANSWERS.—1. I'll resign the floor to any one who has tried it, giving my guess that great care must be taken or the honey would be spoiled by overheating.

2. So far as I know, Mr. Aikin's plan is yet in the theoretical stage. But I think he contemplates using only virgin combs, and old brood-combs might be a very different thing. Pollen and the old combs would likely discolor and flavor the honey.

Amount Consumed by Drones.

Are drones large consumers of honey? B.

ANSWER.—It takes a good deal of honey to rear them in the first place, for a drone is a good bit larger than a worker. I should hardly suppose the mature drone will consume as much in proportion to its size as a worker, for it is not so active, still it must take no small allowance to support it.

Lessening the Quantity of Drones.

Is it profitable to use a drone-trap to lessen the quantity of drones, or can the trap be used for queens to mate with drones from select colonies? B.

ANSWER.—If there are many drones in a colony it will take a good deal to support them, and it will pay to trap them out. As prevention is better than cure, it will be still better to avoid the expense of rearing them by removing nearly all the drone-comb. You can do a good deal toward improving your stock by encouraging drones from your best colonies and repressing the rest. But if bad drones surround you on all sides in your neighbors' colonies, the problem becomes much more difficult.

Transferring Bees—Swarming Management.

1. As I have 12 colonies that I wish to transfer from a cheap frame to a Hoffman frame of the same size, what would be my best way of doing it?

2. My plan for swarming next season is as follows: I must have one empty hive to begin with. Now suppose No. 1 swarms June 2, I will hive the swarm in the empty hive and put it on a new stand. Now June 6 No. 2 swarms, or within one week of No. 1. I will take No. 2's swarm into No. 1, and so on through the whole apiary. Do you think my plan will work to good advantage? NEW YORK.

ANSWERS.—That's easy, the frames being the same size. Wait till fruit-bloom, then with a thin-bladed knife cut out the comb from a frame (it will help if the knife is hot.) Have the frame lying on a board a little larger than the frame. Lift the frame off the comb and put over it the new frame. Have four or five strings of common wrapping-twine long enough to go around and tie. Place these strings at intervals across the frame and comb. Have another board like the first, and place it over frame and all. Now with one hand under and one on top, turn the whole business upside down. Take off what is now the top-board, tie the strings, lift up the board with the frame to an upright position, take away the board and hang the frame in the hive.

2. I think I've read of the same thing years ago. Very pretty in theory, and sometimes successful in practice. But won't you do a good deal better to set the swarm always on the old stand, putting the mother colony on a new stand?

Some Wintering Questions.

1. What will be the result of wire-screen in front of winter hives? Bees fly out when too cold and drop on the ground and die.

2. My 56 colonies of bees are all in winter hives, about 2-inch space all around filled out with dry sawdust, and cover sealed. I find them moist, and it appears that there is mold inside. What will be the outcome?

3. I opened one hive, found half of the bees dead and honey very moldy. I took out four frames, put them into a new hive, and one frame with honey and pollen that I had from the past summer. I put in the follower, sealed up the cover, and put the hive in a dark room. The temperature runs from 42 to 50 degrees; the room is 6x9x9 feet high, ventilated. Will the bees come out all right?

4. I have to feed them. Will it be right to set partly-filled sections in front of the hive? How much will I have to give them? MICHIGAN.

ANSWERS.—I suppose your idea is to put wire-cloth before the entrance, so the bees would have all the air they want without being able to leave the hive. You could hardly do a worse thing, for the bees that try to get out will raise a great commotion, stirring up others that will then try to get out, and when they find they can't get out they will become quite excited, and you'll have a lot of dead bees clogging the entrance, losing more than would have died on the snow. A good many of those bees that die on the snow are ready to die anyhow, so the loss is not so great as you probably suppose. The right thing is to put up a board or boards to shade the entrance so the light will not shine in the hive to entice out the bees when it is too cool.

2. Probably not very good. Better give a little vent at the top through the sawdust, or if there is no sawdust on top, you must try to help the matter in some way. One way will be to put on top a lot of packing of some kind, carpets, rugs, planer-shavings or something, and allow the moisture to pass up through. Perhaps it may do to leave the hives sealed up, pile on packing on top, and give air at the entrance. In any case don't have the entrance too small, but if there is no chance for upward ventilation, a larger entrance is needed. An entrance ½-inch high the width of the hive is probably none too much if all is tight on top.

3. Hard to tell, but chances are fair if room is entirely dark. If there's a little streak of light coming in somewhere, your bees will likely make for that.

4. It isn't certain it will be successful. If it's too cold, bees won't touch it. If warm enough for bees to come out of the entrance to take it, there's danger of robbing. That might be managed by giving it on a warm enough night, and taking away any that might be left before time for bees to fly next morning. Probably you'll need to feed all you can get them to take, hoping that spring may come early enough so they'll pull through. August or September is a much better time to feed bees than February.

Making a Range for Bee-Pasturage.

Won't we have to make a range for bee-pasturage if we make a success of bee-keeping? ILLINOIS.

ANSWER.—We cannot make a success of bee-keeping without a range of good pasturage, but if we lack that I don't feel so very sanguine about our being able to make the range.

Perforating Wood Separators.

Would it be advisable to bore holes large enough to admit the passage of bees through the wood separators, opposite the center of each section? MINNESOTA.

ANSWER—Decidedly a good thing. They will probably be all right if the holes are not larger than ⅜ inch, and the more holes the better.

Keeping Bees in Town—Looking at Bees in Winter.

1. I thought of keeping a few colonies of bees, but as I live in town, I don't know if it's allowed in a city. I have two lots planted to peaches, plums and cherries. I thought it would be a nice place, but I don't want to get into trouble.

2. If bees swarm are they apt to sting any one living near by? How could I keep boys from pelting the bees?

3. Again, I have one colony in the cellar; do you think I could lift off the top of the hive and look in to see if they have plenty of honey? Do you think they would come out if I bored three inch-holes on top of the hive to give them air? MICHIGAN.

ANSWERS.—1. It is not likely that there is any objection to your keeping bees, but you can easily find out by asking the mayor.

2. Bees are not apt to sting any one living near by when they swarm. They would be more likely to make trouble when not swarming, if they should be placed near the street where people were passing by. It would be a help against this, and also be some security against the boys pelting them, if you have a high fence between them and the street.

3. If the top is not nailed on I think you could lift it off without the bees coming out. Move very gently at it, and if the bees get stirred up too much, wait till they settle down again. Of course the cellar must be kept entirely dark, but you can have a light in it long enough to look at them.

Getting a Colony Out of a Tree.

Last fall I was hunting bees and found a tree on another man's land about six miles from my home. The man that owned the land would not let me cut the tree, on account of its being a shade-tree, but told me if I could take the bees out and not damage the tree I could do so. I would like to get them out in the spring, as soon as it would do. How can I proceed to get them and save them? At what time can I do so in the spring? WISCONSIN.

ANSWER.—Probably the first thing would be to see whether you couldn't buy the tree and then cut it down. If the tree couldn't be bought, then a little special prospecting and engineering on the spot would help decide what should be done. Try to find out about where the upper part of the hollow is, and where it terminates below. If the entrance-hole is away at the upper end, then bore a hole at the lowest part of the hollow. Most likely, however, the entrance is toward the lower part of the hollow, in which case bore a hole clear at the lower end. Then with a well loaded smoker pour continuously smoke into the lower hole until the bees file out at the upper hole. If it is so you can, have a hive located at the hole where the bees come out, so they will run right into the hive. If that cannot be done, then smoke the bees out without the hive, and closely plug both holes so not a bee can get back. Then treat the bees as you would a swarm, taking the cluster as soon as it settles and putting it in a hive. It is possible that you might drive the bees out without making any extra hole, by dropping in some very strong-smelling substance such as naphthalene, or perhaps carbolic acid.

Characteristics of a Bee-Keepers' Wife.

On page 22 you say: "If you want to know the kind of a woman to select for a bee-keeper's wife, I have some good advice on tap." Well, let us have it. YOUNGSTER.

ANSWER.—Just a few points may be sufficient as a guide. A bee-keeper's wife should be willing, on occasion, to take a few stings for the sake of being helpful. Considering the price of honey, she must be willing to do without many hundred dollar dresses. She should be able to wash, iron, bake, and hive a few swarms between times. She should have so much good sense that she wouldn't be willing to marry a millionaire if he used whisky or tobacco, or if he were not clean and pure in his speech and life. She should be one whose highest happiness consists in living for others, and who will remain single all her days rather than marry one who is not of the same mind. When you find one to come up to these requirements, you may do well to begin to save up something to start housekeeping, *if*—you're good enough for her.

A Bachelor Information-Seeker.

On page 22 you say you have some good advice on tap as to the selection of a wife for a bee-keeper. Now give me the best you can. TENNESSEE.

ANSWER.—I refer you to answer already given to your question, as askt by "Youngster," and would say in addition, give the preference to a girl that is willing to have her pretty white hands soiled rather than to have her mother wash all the dishes.

Feeding Bees in Winter—Transferring.

1. I have five colonies that are short of honey. They haven't enough to last till Spring. They are in 10-frame hives, and seem to be all right otherwise. What would be the best to feed? How can I feed at this time of the year?

2. I want a book on transferring bees. ILLINOIS.

ANSWERS.—1. Nothing can be better than combs of sealed honey, and it's a good plan always to have a stock of these on hand. Quietly and carefully take out a comb the side where there are the most combs without bees, and remove the frames till you come to the cluster of bees. Then put in your frame or frames of honey, and put back enough of the empty combs to fill up the hive. If you haven't any combs of honey turn to page 83 of this Journal, and you will find instructions from Edwin Bevins for making candy, which is the next best thing after combs of honey.

2. You will find instructions for transferring in any one of the leading text-books on bee-culture. Perhaps you will like better to wait till the bees swarm before transferring.

[We mail Prof. Cook's 460-page "Bee-Keepers' Guide" for $1.25—or club it with the Bee Journal for one year—both together for $1.75.—EDITOR.]

Using the Dadant Hive—Separators.

1. As I wish to keep only 40 or 50 colonies, could I use the Dadant hive for comb honey, and yet prevent swarming successfully?

2. Would it do to use the Dadant hive with dummy or division-board reduced to eight frames till I have about as many as I want, then take out the dummy and use it for extracting honey?

3. What kind of separators is the best to use in the super for comb honey? Would tin ones do as well as wood? I am using the 8-frame Langstroth hive now. IOWA.

ANSWERS.—1. The Dadants have used their hive successfully for comb honey, and altho they now work entirely for extracted honey, if they were to change to comb honey they would probably not change their hive. But you would hardly be wise to change with the expectation of being as free as they from swarming without first trying it on a small scale.

2. You can contract to any desired number of frames, but 8 Dadant frames would be a good deal more than 8 Langstroth frames. You could fill up with frames and extract from them, but it would hardly be as satisfactory as to have your extracting-frames in a super, for you'd be likely to be troubled with more or less brood.

3. Separators are generally made either of tin or wood. If the separators are loose, wood is generally used. A loose tin separator might bend in and out and make bad work, while the stiffness of the wood prevents this. If the separators are nailed on, tin is used, the tin being stretcht tight when being nailed.

GENERAL ITEMS

Cold Weather in Colorado.

We are having cold, cold winter weather here now, 8 and 10 degrees below zero most of the time. I guess the bees are all right; they were when last I lookt at them.

Otero Co., Colo., Jan. 27. W. BISHOP.

Open Winter So Far.

We have quite an open winter here, the roads and fields are dusty. Bees did very poorly here during 1897. I secured about 50 pounds of surplus honey from 30 colonies, spring count. Those that secured enough stores for winter are in good condition at present in the cellar, dry and quiet.

I must have the Bee Journal, honey or no honey. JOHN M. SEILER.

Carver Co., Minn., Jan. 31.

Bee-Keeping in W. North Carolina.

I am wintering 54 colonies of bees here at home on the summer stands, without any protection except a single-walled hive. I don't expect to lose more than 2 per cent. I did not get any surplus honey last year of any importance. There has been a general failure in the honey crop for the last two years in these mountains. Bees actually starved to death in August here, but when September came, they got enough to carry them through the winter safely, so that was very good, for I began to get scared for fear I would have to feed, as I don't like that sort of bee-keeping. I hope we will all have a prosperous season this year.

A. J. MCBRIDE.

Watauga Co., N. C.

Bees Get More Interesting.

If I had never seen the American Bee Journal I might have gotten along without it, but the sample copy received in September induced me to try it for three months, and now I don't see how I can get along without it.

I have been in the bee-business for eight years, and the deeper I get the more interesting it becomes. Last summer I did considerable transferring. It was a tolerably good season for honey, and the prospect is good for being considerably better this year. I produced about 1,200 pounds of honey from 32 colonies, spring count. Altho a man of average truthfulness, there are some of the box-hive bee-keepers who come to see me, hinting as much as if I had overestimated the capacity of my bees, but when I show what I have on hand, and my sale book, and estimate what has been used in my family, they are pretty well satisfied as to the truthfulness of my assertions, and it also has a tendency to create a fever.

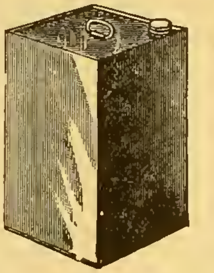
Van Buren Co., Iowa. JAMES COE.

Bee-Keeping in Dixie.

I am a novice in bee-keeping. Altho I have had bees before, I did not know of the improved methods until last year, too late for honey, but I divided and have six colonies instead of two. With hybrids, Italians, and Carniolan bees, I have a variety of bees, but all in dovetailed hives.

I have a good deal of theory gathered from bee-literature. If I can put part of it into practice, I think I can make a success of it. I know it would not do to try to put all in practice we learn from books. I notice the questions askt in the Bee Journal of experienced bee-keepers, and after reading the answers, and finding them so different, I wonder what an inexperienced man is to do, but go ahead and learn for himself.

I am amused reading about the chaff hives, and all other appliances they have for keeping bees warm in winter in the



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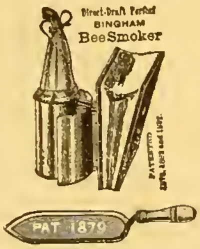

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January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

Mr. Bingham, Dear Sir:—Please send per mail a 4-inch Smoke Engine. I have one of your Smokers; it is too small in time of trouble.

February 21, 1898. A. F. SEWARD, Riverside, Calif.

9A9t T. F. BINGHAM, Farwell, Michigan.

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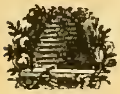

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North and West. All I have done to my hives is to take the supers off, and let the hives remain on the summer stands. There has not been 10 days all told this winter that the bees did not fly; they are bringing in pollen now. We have no great flow of honey from any one plant, but we have wild and cultivated flowers from March until November. Our nearest bee-supply house is 200 miles away, therefore the box-hives, log-gums, and black bees predominate in this part of the country.

January 12. ALABAMA.

Bees Were in Good Condition.

My bees went into winter quarters in fine condition. Some of them that were in 12-frame hives had over 100 pounds of honey. I have a swarm that came off Oct. 10, and stored some honey, but I am feeding them; they have brood in the hive now. They are in the sitting-room where it is very warm.

I see there is some difference of opinion as to hives. I like the large hives best, as the swarms are so much larger, and do better. I cut 23 bee-trees last summer, and I noticed that when they had lots of room they had enough bees to fill it with honey. Where the cavity was small, they usually didn't have it full for want of comb to breed in. H. GILBERT.

Jasper Co., Iowa.

Better Than the Dailies.

I would not do without the American Bee Journal for the money, for there is more news in it than half of the daily papers that cost four or five dollars a year.

Cass Co., Nebr. C. C. BRUSH.

Bees Wintering Well.

Bees (135 colonies) are wintering well. We had a good crop of honey, and all is sold, with calls for more. Success to the "Old Reliable." R. H. ABBOTT.

Loudon Co., Tenn., Jan. 29.

Bees Helpt Him Out.

I am very much interested in the American Bee Journal, and if I had a little more room for my bees I would go right into the business. I had only 8 colonies last spring, got about 700 pounds of comb honey, and increast to 13 colonies, and that was a help during a 7-months' strike.

Bureau Co., Ill. PETER RUNLUND.

Wintering Well—Cold in Tennessee.

Bees have stood the winter well so far, and are in fine condition. I have run an apiary for the past 20 years, and have not had bees winter better. It is cold at this writing—down to zero this morning.

G. D. HAWK.

Sullivan Co., Tenn., Feb. 3.

Bees Wintering Well.

I am wintering 110 colonies of bees this winter. They are doing well. They produced last summer about 5,000 pounds of comb honey; they didn't swarm much last summer. I have had bees here about 30 years. I used to keep them in the box-hive. WILLIAM FLEMING.

St. Croix Co., Wis., Feb. 4.

Hope for Good Season.

The bees seem to be wintering all right so far. I put an even 100 colonies in the cellar this winter. There was not much honey produced in this county last season. I had only about 400 pounds of surplus honey from 70 colonies, spring count, all dark or fall honey, no light honey. There are a few bee-keepers that did a little better than that in localities where there are but few bees kept, but through the county generally there was but very little surplus honey gathered, tho nearly all gathered enough for winter stores late in the season, mostly after about Aug. 20. But perhaps what

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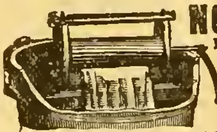

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1A26t WALKER, Vernon Co., MO.

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made last season a poor season for honey will make next season a good one. I can see no reason now why it should not be. There was plenty of young white clover last fall, and basswood. Where it does not bloom one year it usually blossoms very profusely the next. So we are hoping for a good honey-flow next season. (What a glorious thing it is to be filled with hope !)

And then if the New Union only gets in a little good, hard work on the glucose mixers, and the American Bee Journal knocks out a few more of the dishonest commission-house rascals so we can hope for good prices for our honey (if we get any honey), we shall have a good deal to feel thankful for along those lines. S. LAMONT.

Wabasha Co., Minn., Jan. 18.

Report for 1897.

I commenced the spring of 1897 with 24 colonies, and got some over 700 pounds of honey, mostly comb, and increast to 44 colonies. All are in good condition. My honey is all sold in the home market at 7 to 8 cents for extracted, and 10 to 14 cents per pound for comb honey. The winter is fine here, good sleighing, and not severely cold so far. THEO. REHORST.

Fond du Lac Co., Wis., Jan. 29.

A Beginner's Report.

The information that I got out of a sample copy of the American Bee Journal has been worth one year's subscription to me. I am new in the business. I went to a friend's house early last spring; he was looking at his bees, and showed me the interior of the hives, and I got the bee-fever, altho that was the first time I had ever seen the inside of a hive. Three days later I had purchast six colonies, and I managed to get through the summer very successfully; out of the 6 only 4 stored any surplus honey, and from them I got 150 pounds of salable honey in sections; and I think that they have a good store for the winter.

CHAS. S. COCHRAN.

Baltimore Co., Md., Jan. 30.

Co-operation—Big Honey-Eater.

I am suprised that the American Bee Journal does not teach, preach, print and shout co-operation in some form or other for "bee-men." Is it not a fact that co-oper—oh, well, you see my drift.

I have boycotted sugar. I use from 5 to 6 pounds of the best extracted honey per week. How much should I use, that I may be the champion honey-eater ?

The weather continues dry.

Riverside Co., Calif. A. F. SEWARD.

[Yes, we believe in co-operation, and in honey-eating. Perhaps you are now the champion eater of honey, as you are putting nearly a pound a day out of sight. May your tribe increase, and earnestly practice "co-operation" in the consumption of honey !—EDITOR.]

And Still They Come.

Now I thought there were too many writing in the Bee Journal, so I would keep mum, but there are things that hit too hard. The last one is Thomas Chantry's report, on page 40. I read it with the book right side up, and then turned it all other ways, but can't make anything out but 1,371 one-pound sections filled from one divided colony. Now, South Dakota is not a warm country in winter, and if that was pure honey, I must throw up the sponge; 114 pounds for each month in the year—is it done by handling the bees or the type ?

In 1896 I got 240 pounds, average, and in 1897 190 pounds, average, all extracted, and I thought I did well; but O my ! that's nothing to our South Dakota man.

I have 70 colonies, but owing to my poor health they are in bad condition, but "Gip," my hired boy, is getting them in shipshape again.

I have been in the bee-business off and

on (mostly on) for 45 years, yet I know but little about bees. The American Bee Journal is a great help to me.

I will keep still if something doesn't hit me again. H. F. BAKER.

Liberty Co., Fla., Jan. 25.

[Mr. Chantry must have meant the colony and its divisions. and likely had a good fall flow. But if that is not it, Mr. C. can arise and explain.—EDITOR.]

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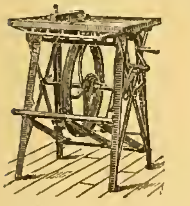

Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will. Catalogue and Price - List Free.
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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Ill., Feb. 21.—Fancy white is not plentiful, and sells at 11c.; good No. 1, or grade of that character is abundant, and sells at 7 to 9c.; amber and dark, 7 to 8c. Extracted, white, 5 to 6c.; amber, 4 to 5c.; dark, 4c. Beeswax, 26 to 27c.

Much of the comb honey is granulating this season.

Detroit, Mich., Feb. 1.—Fancy white, 11 to 13c.; No. 1. 10 to 11c.; fancy amber, 9 to 10c.; No. 1, 8 to 9c. Darker grades are selling lower and in better supply and can be bought at 6 to 7c. Extracted, white, 5 to 6c.; darker grades, 4 to 5c. Beeswax is in good demand at 26 to 27c.

Indianapolis, Ind., Jan, 15.—Fancy white. 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white. 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand.

Milwaukee, Wis., Jan. 24.—Fancy white 1-lbs.. 11 to 12c.; A No. 1, 11 to 11½c.; No. 1, 10 to 11c.; No. 2. 8 to 9c.; No. 1 dark. 8 to 9c. Extracted, in barrels. kegs and cans, white, 5½ to 6c.; dark, 5 to 5½c.

The supply of honey is good and the quality very nice as a general thing. The demand is not up to our desires. yet we are hopeful it will improve and all will be wanted at fair value. We feel like sustaining prices, and continue to quote as above.

St. Louis, Mo., Feb. 9.—Fancy hite comb. 10 to 11c.; No. 1. 10c.; amber, 9 to 10c ; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

Boston, Mass., Jan. 18.—Fancy, in cartons. 12½ to 13c.; in glass, 11 to 12c.; A No. 1, 10 to 11c.; No. 1, 9c.; No. 2, 8c.; No. 3, no sale. Beeswax. 27c.

The demand for honey is light on all grades, with a full supply. Pure beeswax is in good demand, but supply is light.

Philadelphia, Pa., Jan. 18.—Fancy white, 10c.; No. 1, 9c.; amber, 8c. Extracted, white, 5c.; amber, 4c.; dark, 3¾c. Beeswax. 28c.

Late arrivals of California honey have demoralized our market.

Kansas City, Mo., Feb. 19.—Fancy white comb, 1-lbs., 10c.; No. 1, 9 to 10c.; amber, 8 to 9c.; dark. 7 to 8c. Extracted. white, 5 to 5 1-2c.; amber, 4 1-2 to 5c.; dark, 4c. Beeswax, 20 to 22c.

The supply of honey is large and the demand light.

Buffalo, N. Y., Feb. 11.—Strictly fancy 1-pound combs are in quite good demand from the fact that it has been so scarce and closely cleaned up, and 11c is quite easily obtained. Other grades do not sell much better, possibly a little, ranging from 9 to 6c., as to grade, etc. Extracted ranges from 4 to 6c., and is in light demand. We can recommend shipping strictly fancy and nothing else, unless you cannot do better.

San Francisco, Calif., Feb. 16.—White comb, 1-lbs., 7½ to 9½c.; amber. 4 to 6c. Extracted, white, 4½ to 5c.; light amber. 3½ to 4c.; dark tule, 1¾ to 2¼c. Beeswax, fair to choice, 24 to 27c.

Market is ruling steady for choice to select qualities of both comb and extracted, but more especially for the latter, owing to light stocks and a fair demand, both on local account and for shipment. Increast quantities are expected to be consumed in the course of a few weeks, owing to observance of Jewish holidays. Dark grades are not readily salable, and where custom is secured for this sort. very low prices have to be accepted. Not much beeswax on market, and there does not appear to be the slightest possibility of there being any excess of stock during the balance of the season.

Minneapolis, Minn., Jan. 31.—Market is in an overloaded condition on comb honey. Good chance for fancy white extracted at 5¾ to 6c., but comb is at a standstill, particularly if other than fancy white. Best price available on fancy white comb is 10½c.. and buyers are slow at that. Darker grates or broken lots are unsalable. If shippers would send in their extracted when it is wanted, and not push undesired comb [and vice versa] the stuff would move more advantageously to all concerned. The trouble is, when a fair price is obtainable some shippers hold out for more and in the end lose by it.

New York, N. Y., Feb. 9.—There has been a fair demand for comb honey of late, and we are gradually reducing our stock. Fancy white is scarce and finding ready sale at 10 to 11c.; off grades white and amber. 8 to 9c.; mixt and buckwheat, 6c. Extracted is in fair demand—California white. 5½c ; light amber, 5c.; white clover and basswood, 4¾ to 5c.; buckwheat. 4c.; Southern, 50c. a gallon. Beeswax is steady at 26 to 27c.

Cincinnati, Ohio, Feb. 21.—There is a slow demand for all kinds of honey. We quote 10 to 13c. for best white comb honey, and 3 1-2 to 6c., for extracted. Beeswax is in fair demand at 20 to 25c. for good to choice yellow, with a fair supply.

Cleveland, Ohio, Feb. 22.—Fancy white. 12 to 13c.: No. 1, 11 to 12c.; No. 1 amber, 9 to 10c. Extracted. white, 6 to 6½c.; amber. 4 to 5c. Beeswax, 22 to 25c.

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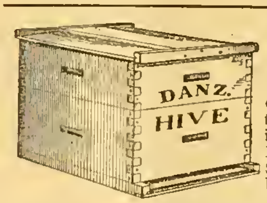

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38th Year. CHICAGO, ILL., MARCH 17, 1898. No. 11.

CONTRIBUTED ARTICLES

Improving the Race of Honey-Bees.

BY REV. L. J. TEMPLIN.

It seems to be the consensus of opinion among bee-keepers that improvement in the honey-bee is a consummation devoutly to be wisht. That this is practicable admits of little doubt. Indeed, there have already been such improvements in modern times as to give lively hopes of still greater advance along these lines in the near future. In order that time and effort be not thrown away, it is important that all such efforts in this direction shall be based on intelligent, scientific principles.

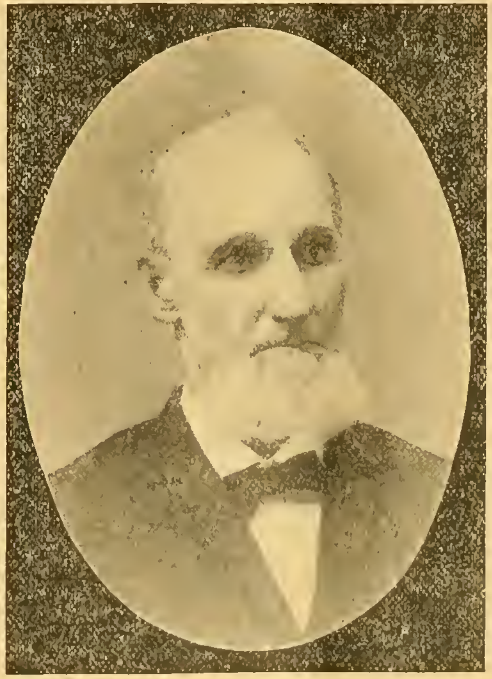
Two general laws lie at the foundation of all propagation of organic beings. These are, first, the tendency of all offspring to resemble, in all essential qualities, their parents. This law is embraced in the axiom, "Like begets like." The second law referred to consists in the well-known fact that there is a tendency in every individual to vary in slight particulars from all other beings of the same species.

By the first of these laws we know with a certainty, within certain limits, what the result of the mating of two animals will be. We know that the offspring will resemble, in all essential characters, the parents from which it sprang. Any violent departure from the specific type is considered a monstrosity, and is rigorously destroyed—in nature, by the uncongenial environment, and in domestication, by the will of the breeder. It is to the second law mentioned above that we must look for the means for improving any race of domestic animals. It is only to a very limited extent that we can control or influence these variations. Yet, by food, shelter, etc., we may do something towards improvement. But it is by careful observation and grasping and fixing the variations that are continually arising from the operation of occult laws, of which we know nothing, that the breeder may make progress towards the goal that he seeks. It is by seizing these slight variations and adding them up in certain directions that progress may be made.

To become an eminent breeder of improved stock of any kind requires a nicety of discrimination, and a correctness of judgment possest by comparatively few. What may be accomplisht by this method, of the accumulation of slight variations, is seen in the different races of domestic animals. There is little doubt but that the different breeds of horses, cattle, sheep, swine, poultry and dogs originated in a single source for each species respectively. It is perhaps somewhat difficult to conceive that the difference between the extremes of some of these races, as that of the Shetland pony and the Percheron or Clydesdale horse, or between the greyhound, the Newfoundland and the spitz or poodle dogs could be the result of breeding and selection along different lines of variation. But tho these differences are great they do not amount to specific value. Indeed, divergences greater than these may exist without exceeding specific limitations. Mr. Darwin says:

"Altogether at least a score of pigeons might be chosen, which, if shown to an ornithologist, and he were told that they were wild birds, would certainly be rankt by him as well-defined species. Moreover, I do not believe that any ornithologist would in this case place the English carrier, the short-faced tumbler, the runt, the barb, pouter, and fantail, in the same genus; more especially as in each of these breeds several truly-inherited sub-breeds, or species, as he would call them, could be shown him. Great as are the differences between the breeds of the pigeon, I am fully convinced......that all are descended from the rock-pigeon (Columbia livia)."

All these differences, wide as they are, have been produced by the selection of those individuals that varied in the direction of the chosen standard, while those that varied in the wrong direction, or that failed to vary in any perceptible degree were rigorously excluded. Now it seems probable that the different races of hive-bees were produced by this same process of selection, aided by the influences of environment. Some have regarded the differences existing among the bees of Europe and western Asia as of specific value, but there seems to be no good reason to consider them so. These differences consist in variations in size, form and color, but they are but little greater than are found to exist between individuals of the same race; and certainly not to be compared with the differences existing among the races of higher animals. The fact that such markt variations should have been produced by the art of man in the past shows the plasticity



Rev. L. J. Templin—See page 169.

of the nature of these insects, and is a guarantee of the success of intelligent, persevering efforts for their improvement in the future.

The first thing for the man who would strive for the improvement of our common races of bees should be to determine along what lines his efforts are to be put forth. Second, he should have a clearly-defined idea of the end he wishes to attain. Third, he should have a settled, definite plan by means of which he expects to reach the desired end.

Suppose he wishes to improve his bees along the line of honey-gathering qualities. This end he hopes to reach by developing a strain of bees with longer tongues than ordinary bees have, that they may gather nectar from flowers with corollas too deep for ordinary bees to reach. There is doubtless a minute difference in the length of the tongues of different strains or colonies of bees. Our breeder would naturally select for the beginning of his experiment the colony with the longest ligula that could be secured.

Now the bee-keeper finds himself at a disadvantage as compared with the breeder of common races of farm stock. It is quite probable that in their efforts to reach to the bottom of deep flower-tubes the tongues of worker-bees often become more or less elongated. Now, if these same workers could propagate their species this lengthened ligula would probably in some cases be transmitted to their offspring, as is often the case with acquired properties. But the worker is sterile, so we must go back to the mother-bee, that probably never makes any effort to increase the length of her tongue. Any progress along this line must be sought in the drone and queen progeny, and can result only from such slight variations as are spontaneously or naturally produced by the operation of unseen and unknown forces influencing the systems of the parent bees. When a queen is found whose worker progeny show superiority over other bees she is to be used for rearing other queens, some of which we may expect will give workers with still longer tongues.

By continuing this process of breeding and selection it is reasonable to suppose that in a few generations a strain of bees may be developt that will readily work on red clover and other deep-celled flowers, to the great benefit of the bee-keeper. Selection may be made by measuring the tongues of the workers or by observing those bees that work on the longest-tubed flowers, and finding the hive to which they belong, and choose it for a starting point in improvement. Improvement in any other direction may be secured by pursuing the same course towards any other desired end.

San Diego Co., Calif.

A Few Comments "Pro Bono Publico."

BY "COMMON-SENSE BEE-KEEPING."

I am not employed to answer questions nor to criticise articles, but I feel constrained to make a few remarks, and with the clemency of the editor, here they are:

That Grafting-Wax Recipe on page 22 seems wide of the mark, compared with what I learned from a grafter about 40 years ago, and I have also seen it publisht in nursery recipes, and have also talkt about it with nursery-men and grafters at various times, and supposed it was the universal rule. The proportions are (whether taken in pounds or ounces) four of rosin, four of beeswax, and one of tallow. Too much tallow will make it melt easily by the sun, and drip off from the tree.

Transferring Bees.—In that new way of transferring, given on page 5, the danger is that when the box-hive was set in the ground, full depth, to stay for several weeks, bottom end up, with the new hive over it, a big rain storm might come along and fill the hole and old hive itself full of water, and drown everything therein that couldn't climb for the new hive. That would be "drowning out," and not transferring. The delusion lies in supposing that the bees decampt from the old hive, and went to the new one on account of the way they were fixt. It will be noticed that Mr. Delmotte's job was put up right in the hight of the swarming season, and more than likely the old colony was about to cast a swarm, and it did, and the swarm went to the new hive rather than to a tree, just as they might have done if the old hive had not been disturbed. Then in 25 days, when the young brood would all be hatcht, the old hive could be shaken out clean, and the bees put into a new one or united with the other swarm with less than half the labor that was consumed in fussing with the other way.

Bees Freezing—It is a great mistake to say that "bees can't freeze to death." Many thousands could testify to the loss of weak colonies in cold winters with no visible cause but that *they perish by reason of the cold.* In such cases they creep into the cells as close together as possible, like persons covering their heads in a cold sleeping-room. It may be said that "bees hibernate," but the proof is all on the other side, and every living creature that does not hibernate may be killed easily by the frost below their powers of endurance. Stiffness and numbness of the cold does not prove hibernation with the bee any more than it does with man.

The Section Department.—Mr. Hutchinson, important changes are needed in the section department of the bee-hive. When the right thing comes before the public the bees will fill the sections as readily as they now seek to put their honey above the brood and at the sides of the hive. If the near future confirms what the past has proven, the rightly conconstructed "anti-bee-space hive" will figure largely in the reform.

Pennsylvania.

Feeding Bees—When, What and How to Feed.

BY C. P. DADANT.

I once sold a colony of bees to a friend in the month of May. The apple-bloom was just over, and the weather had been cold and disagreeable most of the time. (By the way, take notice that when the weather is unpleasant during fruit-bloom, there is much less quantity of fruit than when the weather has been warm and the bees and insects have helpt the fertilization.) This colony of bees was strong and full of brood, but had very few stores. After delivering the hive and placing it in a selected spot in this man's orchard, the bees were liberated, and I gave the beginner a few instructions. Among other things I said:

The season is a little backward, the weather cool, and between now and clover bloom you will perhaps have to feed these bees. This remark came like a cloud in a fair sky: "Feed them! What? Feed them now? In May? If they can't feed themselves in the month of flowers, what will they do in winter?"

Friend novice, every old bee-keeper will tell you that the most dangerous time for the bees to starve is just at the eve of a big harvest. An indifferent observer may readily believe that there are plenty of blossoms in the fields from the beginning of spring till the drouth of July without any intermissions. This is not correct. Our gardens may be sparkling with blooms of all colors, and roses without end, but the business-blossoms, those on which the honey-flow depends, do not always or in all places follow one another in close rotation. After the willow, the maple and the hazel, there is an interruption. There is another after fruit-bloom. These different plants furnish the colonies just about enough nectar to induce them to rear brood to their utmost capacity, and more honey is consumed than at any other season. Hives that were rich in the fall may have been examined in February and found still heavy with stores, but in March the hive is already much lighter, and by May 1 it often happens that the last drops of old honey reach scarcely to the fresh nectar. A difference of a few degrees in latitude will only change the time of breeding, and the time of blossoms, by a few days or a few weeks, but the result is similar. There is a scarcity just when the colony is most in need of a plenty, and if the queen is very prolific, and the winter supply has not been very great, more attention is needed at the time when it would seem that care was superfluous.

Between fruit-bloom and clover-bloom, in this latitude, we often see three or four weeks when very little is to be had. In favored locations the locust, the gooseberry, the raspberry, and some other shrubs may keep up the larder of the bees, but a few rainy days, when the hive is full of bees, will often cause them to use up their last drop, and, if no succor is at hand, they may be compelled to throw out the brood. Tho the drones are still in the larval state, they seem already to know that they will be useless and fit only to eat the surplus, for they methodically begin by casting these out first. Whenever you notice them carrying out these white drone-grubs, you may know something is wrong, and if nothing is done, and the weather continues unpleasant, or the bloom continues scarce the worker larvæ will go next. Even tho I am an enemy of drones, as my readers have surely perceived ere this, I do not think it well to advise any one to let this hecatomb continue, for while they are destroying the drones, they are stinting themselves, and their queen is likely to relax or perhaps discontinue her laying at a time when her eggs are worth three times more to the colony than all the honey they will need. Bees are *not* wasteful creatures, and if too much is fed to them at this season it is not at all lost, tho it would be an error to crowd them with a surplus at a time when the crop is so near.

Let us watch our bees at all times, but mostly when they are the nighest to a bountiful crop. If a fair allowance has been left for winter, they will still have plenty when the snow disappears. But for awhile after that you will see them carrying in pollen and water, and so little honey that it is a wonder that their stores do not diminish more rapidly.

There are plenty of seasons, tho, when instead of being short they increase their surplus out of every bloom. If the winter is fair, the weather propitious in the spring, they may begin to put honey in the supers even out of fruit-bloom. But such seasons are exceptional.

Strange as it may seem we have lost more bees from starvation in June, within a week of the opening of a good flow of clover, than at any other season, winter included. But in June, as in winter, if the bees starve it is the apiarist's fault. Rainy, cloudy weather, if protracted for four for five days, will often reduce the very finest colonies to the verge of starvation.

WHAT TO FEED TO BEES.

In the fall when the bees have to be put into winter quarters, and they need a supply, our aim is to give them this food as fast as possible, so they may not consume too much of it in breeding. The food is also wanted to be as compact as possible. If first-class honey is not at hand, the very best possible feed may be prepared with granulated sugar diluted with half of its weight of hot water and mixt with about one-fourth or one-third of the quantity of good honey to keep it from crystallizing in the cells. This feed is even better for the bees than average honey, and some of our over-zealous theorists at one time advised the removal of all the honey from the hives and replacing it with this feed. But it is bad enough to have to feed when your bees are short without giving yourself the trouble of removing the honey for the problematic and uncertain gain that might be realized from feeding back sugar syrup.

Bees wintered in the cellar may very well be fed through the winter with cakes of ordinary sugar-candy laid over the cluster. But the most important feeding is at this season of the year, between spring and clover bloom, for on it a great part of the success depends. If our colonies are rich in stores it is well, but they should breed plentifully, and we must urge them to this. A spoonful of warm feed is often very stimulating. The feed should be thinner than in the fall, for water is needed to rear brood, and they can use much thinner honey than in the winter. The nectar that they harvest from the blossoms is often thin enough to run like water from the combs when they are handled, and the feed given to them may well be as watery as this.

In the spring feed little, but feed often. It is better to keep them breeding by repeated feeding, but the quantity should be small, so they may not fill their cells with food that should be occupied with brood. Do not overfeed your bees, but be sure they have enough to keep on breeding all spring.

HOW TO FEED THE BEES.

We use the Hill atmospheric feeder. It is simple and good. An inverted can with a cover pierced with little holes is placed right over the brood-combs. The bees do not have to displace themselves to reach their food, and can get it in any kind of weather. Much or little can be given, and it is away from the entrance where robbers are prone to lurk.

The worst feeder of all is an out-door feeder in which you feed your bees and anybody's bees that may be about. The next worst is an entrance-feeder. Hancock Co., Ill.

Working Up an Appetite for Honey.

BY A. F. FOOTE.

I am a farmer, and began keeping bees about 15 years ago with only the idea of supplying my own table with that most exquisite of all sweet—honey. Without the aid of any bee-literature, I have been successful beyond my most sanguine expectations; and now, that I have arrived at an age when physical labor, on the farm, is practically out of the question, I find easy, pleasant and quite remunerative employment with my bees. Having noticed several articles on "marketing honey," I would like to give my method, which has always exhausted the supply ahead of the demand.

In the first place, I keep a "guide-board" by the roadside, informing the passer-by (who, by the way, on account of it, does not always pass by) that I have honey to sell, sometimes giving the price and sometimes not, as I think best. This brings a good many customers outside the immediate neighborhood, and for whom, of course, it is intended. With this class, and my neighbors, I always let the scales tip in favor of the customer, who is always sure of good weight.

We have a good deal of company, and the very best honey is *always* on the table at meal-time. I will not say that there is not a little "policy" in this, too, as a visitor frequently says before leaving: "I think I will have to take a dollar's worth of that honey; it is very fine."

I keep two or three stores in as many villages supplied, taking goods in exchange, the merchants buying it outright, and sell it for the same price they allow me, making their profit on the goods I take.

Again, I work a little advertising scheme once or twice a year with the church socials, in which I am not the loser at least. It is given out as extensively as possible, that a certain evening "There will be a 'Honey Social' at the residence of Mrs. ———. Supper, 10 cents. Warm biscuits and honey 5 cents extra." I furnish the honey, and the proceeds all go to help pay the minister.

My aim from the start has been to "work up an appetite" for my honey, even if I have to *give away* a section or two here and there. The result is that I am not able to supply the home demand, notwithstanding there are four or five other quite extensive apiaries within a few miles.

Mitchell Co., Iowa, Jan. 18.

The Bees, Not the Queen, Order the "Walk-Out"—Stores for Winter.

BY B. T. STONE.

In 1894 a bee-keeper in Florida askt the following questions in the American Bee Journal:

"When bees swarm, which order the walk-out, the queen or the workers?"

I was not one of the many that answered this question, but I can now answer it to the complete satisfaction of any person. July 19, 1897, I opened a 10-frame hive to examine it for a disease that closely resembled foul brood, and I removed three of the middle frames, placing these in an empty hive fully 4 feet from the hive that I was going to examine, and after I had them nicely placed in the empty hive, I then commenced to examine the remaining seven frames, and to my great surprise a swarm commenced to issue from the three frames in the empty hive, and while the bees were swarming from the three frames, the bees on the seven frames, fully 4 feet away, remained quiet; but after they had all swarmed from the three frames, the bees on the seven frames caught the excitement, and they rolled out of the hive by the thousand.

Now, I am positively certain that the bees on the three frames ordered the walk-out, and I am equally certain that the queen was not on either of the three frames, for I examined them carefully before I placed them in the empty hive, and after the swarm was in the air I again examined the three frames, and not a queen was to be seen. I quickly returned the three frames to the hive and closed it, but I did not get it more than closed when the swarm returned to the hive. As quick as the swarm returned, I opened the hive, this time to look for the queen, and I found her on the outside frame. This experience will forever convince me that the bees order the walk-out, and not the queen.

In 1896 I had a colony to cast a prime swarm at 4:30 a.m. It was so dark and cloudy the swarm could not be seen 100 feet away. I have been a bee-keeper eight years, and I have only lost five colonies during the winter. I know now how to winter bees without the loss of a single colony. Bees will winter far better on good, thick syrup, made of granulated sugar, than they will on the best of honey. I have had colonies in October robbed of the last drop of honey, and would feed them good, thick syrup, and these colonies would come out in the spring and do better in every way than colonies wintered on the best of honey. Preston Co., W. Va.

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Complete Volumes of 1897.—We have on hand about 30 complete volumes of the American Bee Journal for 1897, which we will mail to any one upon receipt of 60 cents. We also have about the same number of the first six months' copies of 1897, which we will mail for 30 cents. As there were 832 pages of the Bee Journal last year, here is a chance for our new subscribers to get a good deal of valuable reading-matter for a very little money. Better order at once, before they are all gone.

CONVENTION PROCEEDINGS

Report of the Northeastern Ohio, Western New York, and Northwestern Pennsylvania Bee-Keepers' Convention.

BY ED JOLLEY.

This Association convened at Corry, Pa., Jan. 12 and 13, 1898. The usual business preliminaries disposed of, a general informal talk on bees was in order.

FOUL BROOD.

Mr. Spitler started the mill with the question, "Does any one know of a foul brood law in the State of Pennsylvania?" No one knew of any such a law, but all were agreed that there should be such a law in every State.

President Dewey askt if any one knew of foul brood in his vicinity. No one knew of it at the present time. Mr. Edgett's bees had had foul brood a few years ago. "It was caused," he said, "by the bees in some hives being accidentally smothered. Having brood in all stages it chilled and rotted in the combs. These combs were given to other colonies, thinking they would clean them properly, but the brood that was subsequently reared in these combs developt into foul brood."

Mr. Nichols thought foul brood might be caused by the injudicious spreading of brood, allowing it to become chilled and rot in the combs.

Mr. Sutton thought that the spraying of fruit-trees while in bloom often killed off the bees to such an extent that the brood was chilled and subsequently caused foul brood. All present, however, did not concur in the opinion that foul brood could be spontaneously germinated, and thought that in a locality entirely free from the disease chilled brood could not possibly cause it.

BROOD-FRAME COVERING IN WINTER.

"What is the best covering for over the brood-frames in winter?"

The majority used burlap or other cloth that would permit moisture to escape. Mr. Sutton used enameled cloth, the enameled side toward the bees. Mr. Nichols had the best results by using a board over the frames, putting it on and allowing the bees to seal it thoroughly. Messrs. Sutton and Nichols both used a heavy packing on top of their sealed covers. Mr. Dewey used a rim covered with cloth, over which he laid felt wrapping, such as is used for covering steam and water pipes, it being a non-conductor of heat and cold. Mr. Peck used a box larger than the hive; setting the hive in the box, he packt the space between the hive and the box with chaff, and also put six inches to a foot of chaff on top of the hive.

EXAMINING COLONIES WITH SEALED COVERS.

The question arose as to how those using sealed covers examined their bees during the winter.

Mr. Nichols always tried to be sure that his bees had honey enough to carry them through, and then trusted to luck.

Mr. Sutton could tell about all he wanted to know in winter by putting his ear to the outside of the hive. If the bees were quiet, or he heard a low, even hum, he felt reasonably sure they were all right. But if every now and then he heard a sharp, plaintive note, he was apprehensive.

Mr. Edgett examined his bees at any time during the winter or summer that he wanted to know how they were getting along.

Mr. Peck would not disturb his bees during the winter, not even by walking through his apiary, if there was a frozen crust on the snow. In fact, if he caught a person walking through his apiary at such a time he would order him out.

The President's annual address was now delivered by Pres. Dewey, in which he exprest his pleasure at meeting those present, and extended his best wishes that success might crown our future efforts.

Mr. Spitler next read a paper on

Spring Management of Bees.

If the conditions necessary for successful wintering of the bees was complied with the fall previous, spring management will be, as a general thing, a very simple matter. Of course, bees must have the needed attention at the right time, even if they come through the winter in the best possible condition.

Some of the colonies will have consumed double the stores that other colonies have by consuming stores in brood-rearing or some other cause or causes. They will have to be attended to—perhaps fed—while other colonies will have abundant stores, too much perhaps, and will need frames of honey taken to be replaced by empty ones so as to give the queen plenty of room for depositing eggs. Without this precaution early and small swarms may be the result, but oftener the hive is too short of stores, even with strong colonies.

In no case should bees have more combs than they can well cover in the spring, if it is desired to build up colonies for the early honey-flow, whatever that may come from. So in most cases contraction of the brood-nest will have to be practiced for best results. But, says one, "That will be fussing too much." Perhaps it will, but as heat is one of the necessary conditions for brood-rearing, heat must be provided; this can only be done by contracting, especially in small colonies. A weak colony with a good queen can be built up to a strong colony if taken in hand in time.

When bees are examined—overhauled—in March, if the weather is warm enough to contract the brood-nest so that brood-rearing can commence, a weak colony should have but three frames at first, and one of these should be full of honey. If the cappings next to the center are broken a little to start up business, all the better. The next time you handle break some more cappings, perhaps on the outside of the comb this time would be best, especially if more than two weeks since first handled.

Then follows expanding the brood-nest, which must be practiced with great caution, and in weak colonies it should not be done until young bees hatch out in pretty large numbers so as to be sure that chilled brood will not result. By adding combs from time to time, and feeding all that will be necessary to keep the queen busy, the very weakest colony can be built up, but better not have weak colonies.

By providing water in abundance in a warm location—in a sunny place protected from west winds—much may be done to prevent spring dwindling. By not giving more combs to the bees than they can cover, the wax-moth, so much dreaded by many bee-keepers, can do no harm. GEO. SPITLER.

Mr. Dewey had some dark honey which he wisht to utilize in the spring to the best advantage. He queried as to whether it was best to feed for stimulating brood-rearing to colonies that had an abundance of honey in their hives, or whether it would be better to feed it so as to fill the brood-combs just before the white honey-flow. The majority thought the stimulative feeding would pay the best. Mr. Peck thought that if he filled the combs with the dark honey just before the white honey-flow, the bees would carry it up into the supers where it would do more harm than good.

The prevention of swarming was next considered. Mr. Nichols' plan was to give plenty of super room in time. He practiced clipping the queens; the first year he clipt one wing, the second the other, and the third he superseded the queen. Mr. Sutton gave room underneath the brood-nest to prevent swarming.

The next on the program was a paper by Mr. L. K. Edgett, on

Management of Swarms.

This subject is one prolific of discussion, and I can do no more than give the method, as it has been a success with me and others who have used it in this locality.

It may be well to give my reasons for its use. With black bees I found the Heddon plan would prevent all after-swarms, but with Italian, Syrian and Carniolan in many instances it only delayed them a few days, and if I cut out all queen-cells but one, left the hive crowded with young bees that had no work, as there was no brood to nurse or comb to build, they would hang out until the young queen began to lay, or they were old enough to go to the fields, and this time was lost.

Here we have a short honey-flow, generally, and not very heavy. Colonies that swarm store very little or none after swarming in the June honey-flow. I do not advise the use of this method in May or August, but on swarms that come at the beginning or during the June flow. When a swarm issues during this time, I hive it in a hive contracted one-fourth, and set it in the place of the old colony, leaving the colony beside it turned at right angles or moved in any way to throw the working-force into the new swarm. The third day after, put the supers from the old hive on the new swarm, and move the old hive so that the entrance comes close to that of the new swarm. This can be done a little at a time, or all at once, as best suits the operator. Leave the hives in this position until the seventh day, then take the frames from the old hive. Shake nearly all the bees down in front of the new swarm, and cut out all the queen-cells but one. Then move the old colony to a new stand to build up for buckwheat. You then have a colony that will store surplus if there is any to be gathered.

I have used hives containing eight frames 8½x11¼, and from that up, and I find this works best with large hives.

L. K. Edgett.

THE MARKETING PROBLEM

was next considered. All present were agreed that the prevailing low price of honey was not due to over-production, but to a class of slovenly, careless bee-keepers, whose chief success was in spoiling the market. Their honey was not worth more than they got for it; but the price paid for it was the ruling price for the season. The only remedy suggested that seemed feasible was by co-operation, and have a bee-keeper in each neighborhood to buy up all this honey and then keep the market supplied, but not overstockt.

HOUSE-APIARIES.

Mr. Dewey next gave a talk on house-apiaries. His house-apiary is built after the plan of Mr. Langdon's, as described in the Bee Journal for 1895, except that Mr. Dewey made his wider than the Langdon plan, having room for his supplies and fixtures inside. He likes it better than an out-door apiary for several reasons. The operator is protected from the hot sun; he can open a hive without fear of robbing; can feed a colony at any time without other bees having access to it; and can lock the door, thus making it safe from prowlers. Its most serious drawback is the loss of young queens at mating time, the hive-entrances being so close together and so much alike.

The Secretary next read a paper written by Mr. N. T. Phelps, on

Progress of Bee-Keeping.

It was probably a mistake to put me down for a paper on the progress of bee-keeping, as I am no writer, and am also one of those who believe it better to put forth one's energies to keep up with the present than to begrim one's hands with the musty records of the past. This places me a little out of my element, but as the task has been assigned me I will do the best I can. The old-time methods of bee-keeping will be mentioned not because they will be new to any members present, but to recall those things and place them in comparison with the present methods, and thereby provoke discussion in practical things that concern the present day.

I now recall no pursuit that has made the advancement that bee-keeping has in so short a time. A few years ago the ordinary bee-keeper knew very little of the natural history of the bee, and almost nothing about proper hives and appliances. Perhaps I can mention no *old* thing or any *new* thing that is not known to every member present, but let me compare a few things used and believed then, with a few things used and believed in now.

When I was young I lived very near one of the best old-time bee-keepers in all the country. He kept a large number of colonies, and it was believed that his would rob and carry home all the bees in the neighborhood. It was of no use for any one else to try to keep bees near him, because his family lived together in greater peace and happiness than any one else, therefore his bees were more loyal to him than to any one in the neighborhood. To-day we know that a good, strong colony in a normal condition will hold their fort against all comers. Give them plenty of honey to gather from the fields, and they don't care if a man does quarrel a little with his wife or mother-in-law. This old bee-keeper's hives were made of rough board boxes or hollow logs sawed off, and two cross sticks put through them, and he never saw the inside of one of them from the day the swarm was shaken off the branch in front of them until they died from some cause that the modern bee-keeper with his movable-frame hive ought to be able to prevent.

The bees themselves seem to have made a great deal of advancement, too. Then they were ruled by a "king." They had to do everything as he commanded, some were soldiers at his command, some stored honey at his command, some gathered bee-bread to live on at his command, others made wax at his command, and when he died they mourned themselves to death for him. Now the colony has no government at all. Every bee is so good and patriotic that each bee does just exactly right every time—does just exactly what is best for the colony under all circumstances.

My neighbor bee-keeper used for surplus honey a box 6x6x12 inches, also made of rough boards, sometimes with a hole in one end covered with a piece of broken glass. Auger-holes were bored in the top of the hive to match, and the box was then set on top of the hive. When the bees got ready—if the family were real good—they would fill this box with honey. The honey was gotten out by prying off one side of the box, usually the bottom, and then cutting it out with a knife. When the honey was sold to a neighbor this box was saved and sent back to the bee-keeper. Quite a contrast with the present method of using one-piece sections. Then that honey sold in those boxes for 25 cents per pound—sometimes as high as 30 cents per pound. Now a net price of 12 cents is quite up to expectation. I don't quite see the progress in that, do you?

The first attempt to make any kind of a comb-guide that I know of, was by pouring melted wax through one or two of the holes in this box and letting it run lengthwise of the box, making a little ridge of wax along the top of the box, when it was then set on the top of the hive. Contrast this with the foundation we use to-day, and the attempt at drawn comb. We know the foundation we have been using is a great success. It is to be proven whether drawn comb will be as much of a success in the hands of the average bee-keeper. This much, however, we do know, that it is one of the greatest mechanical achievements of the present day.

About the year 1856 the "old bee-keeper," before mentioned, had 170 colonies around three sides of a yard, on benches. The next spring he had not *one* live bee left. His neighbors surmised that he and his wife had quarreled, therefore the bees had left. But along in the next summer when the benches were moved so as to mow the weeds, the remarkable discovery was made that the worms had driven the bees out of the hive. He also remembered that he had seen a good many bees coming out of the hives along in the latter part of the winter, but he never thought to blame the worms for it at the time.

Now every up-to-date bee-keeper *knows* whether his bees have enough stores to winter on, and if short of stores supplies them with enough to last them until more can be gathered. *Then* the "king" ruled his lifetime; *now* the queen is removed whenever her usefulness begins to wane.

Many more things could be mentioned, but this is enough for one convention. Mention of some things might be made that I am afraid are not progress in bee-keeping. One of them is the Hoffman frame. While I believe in a distance-keeper or spacer, I want the frame so movable that *any* frame can be readily taken out. We owe almost all of this advancement in bee-keeping to a readily movable frame. When the frame is less movable bee-keeping will not be as scientifically attended to.

Another thing is the "fence" and no-inset section. I have had experience enough to know that many more sections of honey will be damaged in handling and shipping without insets than with.

N. T. Phelps.

The following officers were elected for the ensuing year; President, George Spitler; Vice-President, H. S. Sutton: Secretary and Treasurer, Ed Jolley, of Franklin, Pa.

Franklin was chosen as the next place of meeting, and the time selected is Jan. 11 and 12, 1899.

Ed Jolley, *Sec.*

Report of the Northwestern Bee-Keepers' Convention, Held in Chicago, Nov. 10 and 11, 1897.

REPORTED BY A SPECIAL BEE JOURNAL REPORTER.

(Continued from page 151.)

SECOND DAY—Forenoon Session.

SWEET CLOVER DISCUSSION CONTINUED.

A Member—Is the National Bee-Keepers' Union helping Dr. Besse in his lawsuit?

Pres. Miller—I am one of the Advisory Board of the National Bee-Keepers' Union, and if they have offered any help to Dr. Besse I don't remember anything about it. I don't think that is the case. Dr. Besse, has the National Bee-Keepers' Union promist to do anything in the case?

Dr. Besse—They have promist to stand by me. Mr. Newman and I corresponded, and he said they would assist me.—[In the annual report of the National Bee-Keepers' Union, it states that Dr. Besse has received $75 toward the expense of pushing his suit.—Editor.]

Mr. Baxter—I sympathize with Dr. Besse, and I think it would be proper to help him under certain conditions, but I maintain that the National Bee-Keepers' Union, or any other Union, as far as that is concerned, cannot do anything unless he has been attackt under color of law. Then it is their duty; otherwise, not.

Mr. Stone—I do not believe that it is any of our business to interfere unless it is a State law, and then I would like to see the Union go in and contest that law, and see whether it could stand, to make sweet clover a noxious weed. I wouldn't care if it cost $5 to every member of the Association, as far as I was concerned.

A Member—Sweet clover has been grown in our county (Kendall) for 25 years. It was sowed there on the streets and on the roads by a man for his bees. And from that day to this I believe that the farmers in the neighborhood have been fighting it, and I believe they are fighting it stronger to-day than ever before. The people for miles around my town believe that sweet clover is equal to Canada thistle. Nothing that has ever been written or said seems to affect it.

Mr. Karch—There has been something said about sweet clover which I do not agree with. It doesn't act the same in our locality—Will county. I remember in my boyhood days it was very seldom we saw a plant anywhere. I remember seeing the first one in our garden; it was there for a curiosity. The roads in our locality now are covered in some places, and you can notice the difference, year by year, where it extends further and further. I won't allow sweet clover to grow on my farm any more, not much more than I would Canada thistle. I hate to have anything spread on my farm which is not under my control. The highway commissioners are very careful in cutting sweet clover on the roadsides, and you ought to see what a beautiful blossom there is; the bees as much as two weeks ago were working on that sweet clover on the roads. It is in fine blossom to-day, and I don't believe there is any more killing sweet clover by cutting than there is by pulling the bloom off with a rake.

Pres. Miller—Localities differ. I have a little place of about 40 acres. I sowed over I think about 25 acres with sweet clover, sowed it on grass and everything as it was, simply scattering the seed over the ground. That was perhaps 15 years ago. I tried to encourage its growth all I knew how during that time. This year perhaps on that 20 or 25 acres there may have been half an acre of sweet clover. So you see it doesn't spread so very fast on my place. I have had it die out entirely where I sowed it and tried to keep it—just gave it the same treatment that I would red clover, had a stand come up and have every appearance of being good, except a rather weak growth, yet next spring there wasn't a plant of it there, not one. Yet it flourishes on the roadside.

Mr. Whitcomb—Three or four years ago I noticed all over the northern part of this State, when the pastures were entirely gone, that the farmers were maintaining their stock on the sweet clover on the roadsides. And during those dry years out about Grand Island, Nebr., had it not been for the sweet clover growing on the roadside poor people would have had to sell their cows. Isn't a plant that is so hardy valuable? Isn't it of some value to cultivate as a forage-plant and as a bee-plant? Ought we not to turn in and foster it, and take care of it, and sow it, and put it in a position where it would be of some value? Anything else that came up the farmer community would take hold of and be using as a forage-plant. Something is going to grow along the roadsides, in Illinois and Nebraska, and everywhere there is fertile land in a prairie country. If it is not sweet clover it will be rag-weed or sunflowers. A patch of sweet clover along the road looks a great deal nicer to me than a patch of wild sunflowers. People will pass through sunflowers week after week and never say a word about it, but if they strike a patch of sweet clover they are horrified. Ignorance and superstition are two of the worst evils this country has to deal with. And I have traveled over long stretches of your Illinois country, where if you went a foot your clothing was covered with the pollen from the rag-weed; and it is a villainous weed.

Mr. Baxter—Poisoning the air with its pollen.

Mr. Whitcomb—You sow a little sweet clover there and the whole country is horrified. The nature of sweet clover is not such that it will encroach upon your cultivated land. It may encroach on your pasture a little bit. If it does, you have one of the best pasture plants you ever saw. Let a little patch of sweet clover appear out in your pasture, and you drop your work and go and pull it up and carry it away! Why? Simply because you have not studied the nature of sweet clover, and don't understand that you are destroying one of the most valuable plants that ever grew on your farm, and one that will furnish you pasturage before anything else comes up, and after everything else has been killed by frost.

Mr. Baxter—The Dadants have been growing it for about years; and, as a pasture plant, there is one objection to it. The cattle eat it so close to the ground that it dies out through the winter, very often!

Mr. Baldridge—Mr. Karch says it is so difficult to get rid of. I gathered seed this year from perhaps two acres of ground, and I doubt very much whether you can find a solitary root alive to-day where I cut. In fact, I have a standing proposition where I live, that if they will let the seed get in the dough state, or cut it in full bloom, that there won't be one solitary root alive the next spring. I will give a dollar apiece for every root that will be alive.

Pres. Miller—Would they be alive if they were not cut?

Mr Baldridge—No, but the seed would drop. If you want to get rid of it, you cut it at that stage and you get rid of both seed and root. It is the easiest plant in the world to destroy if you once really understand its habits.

Mr. Karch—I will say that our stock in Will county must be educated to the use of sweet clover as a fodder. I have failed to see any cattle in our neighborhood ever touch any sweet clover, consequently they never kill it by eating it close. That is my experience.

Mr. Green—Sweet clover is no new thing with us. Thirty years or more ago at least there was a patch of it in our garden, and for at least 10 years it didn't get 10 feet away from that spot. Within the last 15 years, and especially within the last 8 or 10, it has grown very rapidly, and spreads all through the highways and waste lands of the neighborhood, and the highway commissioners in most of the townships cut it down very religiously; but I am not at all alarmed. I would just as leave they would do it as not, and perhaps a little rather, because they do not understand the nature of the plant, and they either cut it down at such a time that it grows up and makes late pasturage for the bees, or they cut it so that it gives the young plant a chance to grow. So they are not getting rid of it. Within the last year or two I have noticed it encroaching considerably upon hay or pasture land, but of course it does not stand cultivation. In regard to stock eating it, I have a horse that has never been educated to eat sweet clover at all, but if she can get out of the gate at all, she will attack that clover the first thing.

Mr. Schrier—I can remember about six years ago a family came from Michigan, sowed some sweet clover seed, and it spread out in the road, and I think it spread from our town clear down to Cairo, and all the cattle come from town and keep it down from spring till fall. The roads are well supplied with the sweet clover. My stock had no chance to get at it, so I can't speak for my stock. They don't get out in the road, and inside cultivated land I have none there. On meadow it will grow a little so long as it is not cultivated. So I think sweet clover is a good thing for honey, altho I would call it a nuisance on the highway, the way you see it in some places, as high as a horse where it is not cut down, and it looks ugly. But if the stock are around they will keep it down.

Mr. Thompson—I have a neighbor who has pastured two cows with the sweet clover on the roadside all summer long. The pastures were dry, and if he hadn't had that sweet clover they would have starved, or else he would have had to sell them. With regard to the benefits to bee-keepers I know this: In Kane county for the last two or three years it has been so dry that if we had not had an abundance of sweet clover our bees would have starved.

Pres. Miller—I am very anxious that the highway commissioners shall cut it down on the roadside. It is an objectionable plant, because it grows tall and strong for the roadside. It is worse than most plants in that way. Before it gets to that hight cut it down, so that it will not leave a very objectionable stubble, which will be still disagreeable after it is cut down, but cut it down before it blossoms, and then you have it out of the way, and I feel very certain it will blossom afterwards just when I want it to. With me its blossoms are worthless during the blooming of white clover, because there is so much white clover I don't care for it. But if it can be cut down and bloom a little later then it is of value as a honey-plant.

Mr. Whitcomb—I can agree with Mr. Karch's statement, that stock won't touch it. Stock must be cultivated to it, in general. There may be an exceptional case when a cow or horse getting it for the first time will eat it. Texas cattle, I am told, must be educated to eat corn. Moreover, cattle must be educated to eat alfalfa.

Mr. Cooley—Can sweet clover be grown for forage and also for the blossom for the bees?

Pres. Miller—Yes, and no. Cut it before the first blossom shows, and it will give you a crop of forage, and will not interfere in the least with it as a honey-plant.

Mr. Whitcomb—In cutting for forage it is necessary to be careful not to cut it low. You must not cut it as low as timothy. If you run your mower right down to the ground the chances are you will kill it entirely.

Mr. Lyman—I would ask if any one knows in regard to the present law in this State, in regard to commisssioners cutting the weeds along the roads?

Pres. Miller—I think the law is that they may cut the weeds on the road.

Mr. Lyman—Doesn't it give farmers until Aug. 20 to cut those weeds? I think it does.

Pres. Miller—Perhaps that is true.

Mr. Schrier—They have time till the last of September.

Pres. Miller—Do I understand this, that if you say to the commissioners on your land, Don't touch this until a certain date, that they must concede that?

Mr. Lyman—The farmer, as I understand it, has until Aug. 20, or about that time, to cut the weeds along the roadside, and if he does that he is allowed $1.25 a day, which is applied on his taxes. If the commissioners cut the weeds after that, the cost of the cutting is charged to him.

Mr. Baldridge—I have heard of such a law before, and a great many farmers where I live availed themselves of its provisions. They would be allowed so much on their taxes the coming year. But I understand that the law did not pass the legislature. It was an act before the legislature, but never became a law. A great many will find that out when they come to pay their taxes—they won't be allowed anything.

Mr. Stone—I don't think there is anything of that kind in the law.

Mr. Green—I think Mr. Baldridge is correct in regard to that law. I remember seeing it in the newspapers a report that such a law had been past, and farmers were notified and advised that they could obtain a rebate on their taxes in that way, but a week or two after that the papers informed that the law had not been past.

Pres. Miller—I think it will be well for us to have a little rest, allowing a chance for those not yet members to become so, and I believe Mr. Cooley has brought a sample section of honey built on the drawn foundation.

Mr. Stone—I would like to say that I have samples of the heads of two kinds of clover that I would like to have the members see. They were sent to me by a gentleman in Australia.

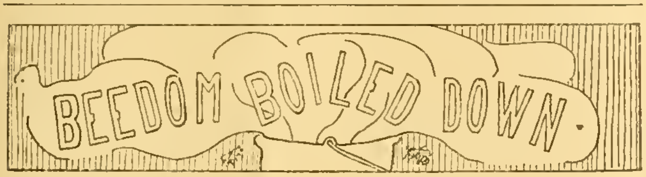
Pres. Miller—What kind of clover?

Mr. Stone—One of them is strawberry clover, and one he called creeping clover. The creeping clover has a seed that is a perfect rosette, and looks as if it were made out of brown paper.

Pres. Miller—It looks almost exactly like the alfalfa seed, only on a larger scale.

Mr. Stone—In those pods there are about five seeds, and for fear I would run out of the seed I planted three seeds out of the five. They are three or four times as large as a red clover seed. They grow very rapidly. Out of the three seeds three plants came, and something killed one, and I got a large teacup of these little pods from the two plants. The strawberry clover has a head just like a strawberry. They have little spots of fuzz on them that look like a strawberry.

(Continued next week.)


BEEDOM BOILED DOWN.

Bucket Honey was slow sale at 8 cents per pound this season, while that put up in pint Mason jars brought almost twice as much. Compliments on the good sense of the consumer are in order.—Somnambulist, in Progressive Bee-Keeper.

Bees Adapted to the Climate.—The best bee for any place must be one that comes from somewhere in nearly the same latitude, according to J. O. Grimsley, in Busy Bee. Carniolans coming from latitude 46° are all right for the North, but breed too much in the mild winters of the South. Italians come from latitude 44°, Cyprians from 35°, and Holy-Lands from 31°, so he would choose accordingly.

Bring up the Grade of Extracted Honey, is what Dan White makes a strong plea for, in Gleanings. He says: "Every fellow has been extracting and grading to his own notion, without saying a word to the other fellows. I believe we have just as good a right to agitate the grading of our product as have the comb-honey producers. While they are polishing and sandpapering their sections, say we put such a finish on our extracted honey that we can draw a little attention. You see they are trying to attract the eye, and we will try to attract the *palate.*"

Prevention of After-Swarms.—Put a cone escape at the entrance of the old hive, having previously set the swarm in place of the old hive, putting the old hive close beside it. No bees entering the old hive, only one queen will be left, and when that is ready for fertilization, remove the old hive to a new stand, or dispose of as seems best. F. A. Gemmill says, in Review, he has practiced this for five or six years, and J. B. Hall longer.

Bees Select Best Queen-Cells.—M. Jukos says in Mehes-zeti Kozlony, that, after careful observation, he finds that bees destroy purposely such larvæ in queen-cells as will not mature good queens, reserving only the best. Acting on this hint, instead of taking cells from a colony immediately after the issuing of a first swarm, he waits until four or five days later, and finds he has not only more beautiful queens, but decidedly better ones.

Don't Heat Wax too Much.—L. A. Aspinwall, in Review, thinks there is danger of getting too great a heat in melting wax, even in a sun-extractor. Over 212° the tendency to soften propolis so it mixes with wax is much increast. For this reason he paints his extractor white, outside and in. This is better for the wood, too, than black. A. C. Miller says many a lot of fine wax has been spoiled, or very much darkened, by allowing the water in which it is melted to boil together with the wax.

Telescoping Hive-Caps over sections are valued by Doolittle. "On cool mornings where there is only the one thickness of lumber between the outside air and the sections, we will find that the bees have stopt work in the sections and very largely gone below, while with the telescoping cap, the bees are enabled to keep up sufficient heat so that comb-building is going on the same as it was the evening before." And nearly the same thing on extremely hot afternoons.—Progressive Bee-Keeper.

Wintering Nuclei.—In reply to a call from G. M. Doolittle for some plan by which queens may be carried over winter, Dr. Miller tells, in Gleanings, how he has wintered in the same hive two colonies or nuclei. A bee-tight division-board separates the two parts, and the two nuclei clustered up against the division-board, forming a single cluster with the division-board in the middle. Editor Root says that before they sold off queens in the fall, they wintered nuclei in this way successfully.

Untimely Brood-Rearing in early spring or late winter, its causes and consequences, are dwelt upon in Sweizerische Bztg., also in Preussiche Bztg. The brood-nest is unduly extended, bees fly much and are lost in the chill season, and too often a cold spell comes on, obliging the bees to shrink to a small cluster, leaving a large amount of brood to perish. Some strains are specially given to this fault, and breeding from these should be avoided. Winter warmly, but not too warmly; avoid too much bright sunshine on the hives; be sure to have abundant stores in the hive in the fall, so there will be no need to excite the bees by too early feeding; allow plenty of ventilation and avoid all disturbance; these are the means advised to avoid the evil results of this unseasonable and exaggerated brood-rearing.

Shipping Bees in Cars.—Frank McNay prefers a stock-car as being cooler in warm weather than a box-car. He says in Gleanings: "My plan was to load the hives firmly, yet apart, so as to secure a circulation of air around each hive. This was done by placing a row of hives across the end of the car, a few inches apart, then securing them in place by laying two rows of lath crosswise on top of the hives, letting the ends of the lath press firmly against the sides of the car, and nailing lath to each hive with 1-inch wire-nails. Then we placed another row over the other, resting on the lath, with space between the hives over the center of the hives in the lower row, then we nailed on two rows of lath, the same as before. This plan workt nicely, as there was not a hive moved from its position *en route*, and as they had to be loaded two tiers deep, this break-joint plan not only served to facilitate ventilation, but also afforded an excellent opportunity to sprinkle water in the top of the lower as well as upper tier of hives, which was done several times, as they were three or four days on the road."

AMERICAN
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Next National Convention of bee-keepers ought to be even larger and better than that of 1897, if that be possible. But whether or not that will be attained depends much upon *where* it will be held. Editor E. R. Root and Rev. E. T. Abbott are whooping it up for Omaha, some time during the great Trans-Mississippi Exposition to be held there from June 1 to Nov. 1, 1898.

The Executive Committee, who have to decide as to where the convention is held, want to be assured of as low railroad rates to Omaha as will obtain to Cincinnati where the Grand Army meets early next September. This assurance the Omaha Exposition people so far seem to be unable to make. So there we are.

In all probability the rate to Cincinnati will be one cent a mile each way, as it was to Buffalo. Personally, we should like very much to go to Omaha, and it seems to us that all the railroads on this continent could well afford to make a straight rate of one cent a mile to Omaha during the months of the Exposition.

The Executive Committee of the United States Bee-Keepers' Union feels that it ought to know something *definite* about rates before it decides to hold the meeting anywhere.

◆

Honey Market of Belgium.—The United States supplies Belgium with more honey than any other, and the trade is well establisht. France is her chief competitor. Out of more than 2,000,000 pounds imported into Belgium in a recent year, the United States supplied 915,000 pounds. So reports the Orange Judd Farmer. We believe a large general foreign trade in United States honey could be developt if the right men could be found to undertake it and work it up.

Foul Brood and Drones.—We have received the following letter from Mr. A. F. Fluckiger, of Oregon, who says:

> As I am a reader of the American Bee Journal, I would like to know your opinion about the article written by Mr. Poppleton, on foul brood, as per the enclosed clipping, as it differs much from Mr. McEvoy's statement. Also the facts about apiculture, from Mrs. Jessie Thornton; I find all a little strange, as I never before read in a bee-journal that the drones are useful for ripening the honey.
>
> A. F. FLUCKIGER.

The articles to which Mr. Fluckiger refers are clipt from the Webfoot Planter, an agricultural paper which seems to be publisht in Portland, Oreg. Mr. E. R. Poppleton says:

> "I do not agree with Dr. Chase (nor do our best bee-journals), as to his statement regarding foul brood. You can no more start foul brood in a hive of bees than you can start a a herd of cattle without a male and female. The disease is caused by a small insect or spora, and must be taken into the hive, where it multiplies very rapidly. It takes from 6 to 12 months to kill a hive—according to the amount of spora taken into it......If bees become weak from the middle of June to October, moths will frequently fill the hives so full of web that the bees cannot get in to contract the disease......As for the bee-moth, I believe they save ten hives to where they kill one—if they ever do kill any, which I very much doubt. In the 8,000 or 10,000 hives I have transferred during my 20 years' work throughout the Willamette valley, I have never found one good hive that I thought the moths could have killed......The reason moths will save bees is because they fill the foul brood hive so full of web the bees cannot get in to carry off the honey. Foul brood hives that die in the winter are the worst to deal with, as there are then no moths to keep the other bees out, and these are sure to smell it in the spring."

It would be somewhat interesting to know what Dr. Chase could have said that would neither agree with Mr. Poppleton nor our best bee-papers. For certainly the bee-papers would not entirely agree with Mr. Poppleton in some of his statements. There must be something peculiar about Mr. Poppleton's locality, for he says you can't start foul brood in a hive full of bees, while elsewhere you cannot find a better place. With him "the disease is caused by a small insect or spora," while elsewhere, instead of belonging to the animal kingdom it belongs to the vegetable kingdom, the whole trouble being laid to a minute plant called "bacillus alvei." In other localities the bee-moth will hardly be considered such a benefactor as to save ten hives to where they kill one!

Then, the idea of moths trying to kill "hives" made of wood! Of course they couldn't. But they have often destroyed colonies of bees.

Mrs. Jessie W. Thornton, who has been engaged in bee-keeping for 20 years, gives "a few facts relative to the honey or section rack." She says:

> "A good colony should consist of from 9 to 12 frames of honey and brood, one good queen, and 20,000 workers. Granting that the operator has a good colony ready for the production of comb honey, he will now place his honey-rack on top of the frames, directly over the brood-chamber. If the weather is fine and there are plenty of flowers for the production of honey the section-rack will be full of unripe honey in from four to six days. Now comes the process of ripening—quite essential—for bees will not cap unripe honey. In the ripening process is where the drones come into use, and therefore they should never be killed off. With their large wings they fan the air, keeping it in motion, and thus causing the water to evaporate from the honey. It will take about four days for the honey to ripen if the weather is fair; if cloudy it will take longer. Ten days is long enough in any case, so in ten days from the time you put on the rack you can take it off and it will be nicely filled with white, ripe honey."

Mrs. Thornton lives quite a distance south of Mr. Poppleton, and if possible has a still more peculiar locality. With 20,000 workers the section-rack will be filled with honey in four to six days, and with fair weather ripened in four days more, so you are always safe to take it off in ten days! In other localities, with twice as many bees, the bee-keeper will think he is doing pretty well if he can have all his sections ready to take off in twice ten days. Possibly, however, it is not so much the locality as the management. While others try to limit the number of drones, Mrs. Thornton kindly fosters them, and they repay this fostering kindness by fanning the air to ripen the honey. But has she not a different strain of drones? for probably no one else has ever known drones to fan the air while in the hive.

BIOGRAPHICAL NOTES.

REV. L. J. TEMPLIN.

L. J. Templin was born at Danville, Hendricks Co., Ind., Dec. 20, 1834. He grew to manhood in Delaware and Henry counties of that State. He got his education in the public schools and by close reading and study at home. At the age of 20 he began teaching in the Indiana common schools. In the spring of 1856 he was married to Miss Mary A. Lerner, of Howard Co., Ind. Two years later he entered the ministry of the Methodist Episcopal church, in the North Indiana Conference. After four years of labor in this field, during which he was much of the time in the midst of great revivals, hundreds being converted and added to the church under his labors, his health failed, and he has been a great sufferer from asthma.

After the failure of his health, Mr. Templin located at Kokomo, Ind., and engaged in the nursery business. Dr. J. M. Hicks, of Indianapolis, became a member of the firm, adding a bee-department. It was here that Mr. T. became interested in bee-keeping. His health proving too bad for the business, he sold out, and after traveling two years as emigrant agent for the Santa Fe Railroad Co., he moved to Hutchinson, Kans. Here he engaged in teaching the common schools, and also had charge of the scientific department of the Teachers' Normal Institute of his county for several years. His health continuing to decline, and his wife's health having utterly broken down before leaving Indiana, their next move was to Canon City, Colo. Here he engaged in fruit-raising and bee-keeping, in both of which branches he was quite successful.

On account of several attacks of la grippe, the health of both Mr. and Mrs. Templin became so impaired again that another change seemed imperative. This time Southern California was chosen. On arriving there Mr. T. purchast a ranch at the foot of the San Miguel mountains, fronting on the noted Sweetwater reservoir, near a station and post-office, about ten miles east of San Diego. Here he is engaged in the bee and poultry business, to which he is adding the raising of Belgian hares. For many years Mr. Templin was a very ardent Republican, but becoming disgusted with the subserviency of that party to the liquor power, in 1884 he became a working, voting Prohibitionist. In this work he has been very active, having served five years as chairman of the county central committee of his party while in Colorado. He also served one term as chairman of the Colorado Prohibition State Central Committee; and canvast that State quite extensively in the interest of prohibition and The Challenge, the organ of the party in that State.

Mr. Templin has been a rather prolific writer for the public press; dealing largely with rural and scientific topics. Political and religious subjects have also engaged his pen to a considerable extent. Some of his writings have commanded considerable attention, being reproduced in leading publications in both America and Europe. A FRIEND.

THE WEEKLY BUDGET

☞ MR. THOS. GLANCY, of Hardin Co., Iowa, gave this office a call March 10, when in Chicago with stock. He sells his honey crop in the home market, having about 30 colonies.

MR. GEO. C. LEWIS, son of G. B. Lewis, of the G. B. Lewis Co., called at this office March 5. He reported a busy time at their bee-supply factory. They are preparing for a large trade this season.

"NO BUSINESS DONE ON SUNDAY" is a prominent line in the bee-supply catalog of M. H. Hunt, of Michigan. We were pleased to note it. There are too many who reserve their bee-work or bee-business until Sunday. If a man cannot keep bees without doing the work on Sunday, he would better let bee-keeping alone. We believe in resting on Sunday, in getting our mind off of week-day business cares and work. Six days labor out of seven is enough. All the world would be better off did it rest a seventh of the time. And as the great majority have agreed on Sunday as that "seventh," all should unite in seeing that everybody may rest on that day, and that no secular work be done.

MR. ALLEN LATHAM, of Norfolk Co., Mass., has this to say of the Bee Journal of last year:

"I consider that the 1897 American Bee Journal is the best of all years for at least 10 years."

Well, we have some complete sets of last years numbers still on hand, which we will mail to any one ordering, at 60 cents each. There are 832 pages in the volume—pretty cheap at 60 cents.

Mr. Latham has kindly sent us a sample of aster-goldenrod extracted honey, which is of a rich, golden color, and most excellent flavor. For a fall honey we do not know of better.

MR. T. S. FORD, of Scranton, Miss., the February Bee-Keepers' Review reports, died last November. Mr. Ford for several years wrote excellently for the Bee Journal as well as some other bee-papers, especially on the subject of bee-paralysis, with which he had considerable experience. He was one of the two or three that preferred to do without the American Bee Journal rather than see its reformed spelling. We regretted that so evidently intelligent a man should take such a stand, but he did, and we doubt not, had he lived, in a few years he would have been surprised that he ever could have lookt at the subject as he did.

MR. JOHN DETWILER, a Florida bee-keeper, is also interested in oyster and clam culture. In a local newspaper he has two articles, one on "Experimental Oyster Culture," and the other on "The Propagation of the Soft Clam." About all we know about oysters is that we like to eat them; and as to clams—well, like a clam, we're softly mum.

PRES. E. S. LOVESY, of the Utah Bee-Keepers' Association, sent us this testimonial, Feb. 17:

"I am well pleased with the grand old American Bee Journal. It seems that there is some new feature, or something new and interesting, every week, for the benefit of bee-keepers."

CATALOGS FOR 1898 are on our desk from the following who are among those patronizing the advertising columns of the American Bee Journal:

Marilla Incubator Co., Marilla, N. Y.—Incubators.
M. H. Hunt, Bell Branch, Mich.—Bee-Keepers' Supplies.
Northrup, King & Co., Minneapolis, Minn.—Seeds of all kinds.
W. T. Falconer Mfg. Co., Jamestown, N. Y.—Bee-Keepers' Supplies.
Reliable Incubator and Brooder Co., Quincy, Ill.—Incubators and Brooders.
Gus Dittmer, Augusta, Wis.—Bee-Keepers' Supplies.
Electric Wheel Co., Quincy, Ill.—Wide Tire Wagon-Wheels.

MR. S. T. PETTIT, of Canada, writing us lately said:

"I enjoyed the 'kicks and growls' sent in by Mr. Jenkins, on page 120, tho I don't agree with him in kicking at your improved way of spelling. My wife and I rather like the short cuts—it never 'shox' us a bit. But, soberly, I am getting used to it, and like it."

In a few years we expect to find plenty more people commending us for our stand on spelling reform, who now look upon it with disfavor. Many unpopular things of the past are now "right in style." Before the first locomotive was invented, some peoble said it never could be made to run; then when they saw it running at about 10 miles an hour, they said it couldn't be made to stop! Of course, if some people want to go on writing *six* letters where *four* will do better, that's their privilege. See a few of them: Capt for cap*ped*, ript for rip*ped*, nipt for nip*ped*; then five in place of seven: dropt for drop*ped*, shipt for ship*ped*, stopt for stop*ped*, etc.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Building a Bee-House.

If a bee-house is built with drop-siding and building-paper on the outside of the studding, and shiplap and building-paper on the inside of the studding, with building-paper between the roof-board and shingles, ceiling boarded with shiplap and building-paper, with ventilator on top, will it winter bees all right? WISCONSIN.

ANSWER.—So far as the house is concerned, it's probably all right. But you can't depend upon a house alone. Some kind of proper packing must be used, at least over the hives. The house will not keep the bees as warm as in a cellar.

Putting Bees Out of the Cellar.

My bees in the cellar are doing well. Would it be advisable to take them out when sap flows from soft maple? I have quite a grove of maples, and could tap and let the bees work on it if it were prudent. I know bees work on the maples, but I am at a loss as to when would be best to turn them out. I am experimenting with top ventilation of hives instead of bottom. IOWA.

ANSWER.—Better not take them out till your soft maples bloom, according to some, and according to others take them out about the first of April whether maples bloom or not.

Tell us how you come out about your ventilation. You'll likely find that in the cellar your bees will be all right if other things are right, whether the ventilation be at the top, bottom or middle.

Wintering in a Bee-Shed—Black Drones.

1. I have a bee-shed 16 feet long, three feet at the back and four feet at the front. I have a trap door to let down on the south side, and it is fastened up by strap hinges. I have my bees in dovetailed hives, and they are all packt in the shed with fine straw two inches thick. A part of my bees have plenty to go on. The hives will weigh all the way from 50 to 60 pounds. Where is it best to winter bees, in a shed or out in the open air?

2. What would you do with the drones from black bees if you were to give them Italian queens—trap them, or not? IOWA.

ANSWERS.—1. It isn't easy to tell without trying, but very likely they'll winter all right in the shed. Look out that the entrances don't get clogged.

2. What is best to do with the black drones depends on circumstances. If there are plenty of black drones within half a mile or a mile of you, it isn't worth while to do very much about your own. If you have only your own to contend with, then it will be well to trap them. But in this case prevention is better than cure, and it will be well to get as nearly as possible all drone-comb out of the black colonies.

Candied Honey for Honey-Vinegar.

I have some brood-frames full of candied honey. Will it be fit to make into honey-vinegar? COLO.

ANSWER.—It will be excellent for that purpose if the combs are clean.

Hives Under Apple-Trees—Unfinisht Sections.

1. I have no bee-shed, so I set my hives under the shade of apple-trees, where the apples, in falling, hit the hives. Will this disturb the bees enough to make it advisable moving them out in sun? Apple-trees are all the shade I have.

2. What would be the best way to dispose of partly-filled sections? Would it be advisable to put them where the bees could clean them up—I mean out-doors? If so, when would be the best time? The bees have plenty of stores and could do without any feeding, but I would much rather the sections be cleaned up if it would be advisable. KENTUCKY.

ANSWERS.—1. I have had bees under apple-trees for years, and while I'd a little rather the apples wouldn't thump the hives, yet I don't believe it does much harm, and I expect to continue using apple-trees for shade.

2. It is quite possible that the best thing you can do with those sections, if there isn't enough honey in them for table use, is to melt them up, taking pains to melt them *very* slowly, no matter if it takes two or three days for it; then when melted and cooled, take off the cake of wax. For the honey is probably more or less granulated, and if it is, the bees are not likely to clean it out so clean that not a particle of the grains of honey will be left, and any grains of honey will be a damage to the new honey stored in them. Of course it will be all right to feed them to the bees before melting, if you like, in which case it will be well to have something placed under to catch the chips of wax and grains of honey. If you had allowed the bees to clean them out last summer or fall, then the sections would be good to use this summer again.

Italianizing—Carrying Out Bits of Comb.

1. I want to Italianize my apiary next season. Not desiring any increase, how would it do to remove the black queens when they begin making preparations for swarming, and give the queenless colonies queen-cells in a day or two afterward?

2. Could as much comb honey be produced in this method as by waiting till the honey harvest is over and then requeen?

3. My bees are wintering on the summer stands. Some of them seem to be carrying bits of comb or wax out upon the alighting-boards. Are those that are carrying out the comb doing as well as those that are not? There is no moth. BEGINNER.

ANSWERS.—1. It will do all right if you're sure to give them good cells and not have them swarm.

2. Keeping the force together in this way ought to give good results in honey, perhaps better than if you let them swarm and requeened after harvest.

3. That's nothing against them if it's the bits of capping and refuse from the bottom of the hive. If it's pieces of comb broken from the cell-walls, there is danger that mice may be troubling. It's a good plan to have the entrances closed with wire-cloth having three meshes to the inch; this will allow free passage for the bees, but bar the mice.

Foul-Broody Combs.

I sent to Arkansas for a queen and introduced her all right. This was the beginning of June. I put a second story on with drawn combs, that I got from a neighbor. The bees cleaned them up and fixt them ready to fill with honey. That was all they ever did. I took off the second story to examine them, and I found four frames with a great number of cells not hatcht out, and all brood dead. I stuck a splinter into it to see if it was ropy; it did not draw out much; the cell-cappings were shrunk a little. I think it was foul brood. I got a clean hive with starters and shook the bees off in front, and after the bees had quit flying they seemed to work a couple of days, then the next time I lookt the bees had fled. I lookt over the orchard expecting to see them, but that was the last of them. I was not a bit sorry.

Would it be safe to use those combs that the bees cleaned up? They did not put a particle of honey into them, and they are nice and clean. I would not like to melt them up. How would carbolic acid and water do? ONTARIO.

ANSWER.—If I had those combs I wouldn't be a day older till I'd cut them out, and use the frames for fuel to melt the combs. Too much risk to fool with any kind of drugs in a case of that kind.

Using Combs on Which Bees Died.

1. My first winter with bees, I find one colony as "dead as a door-nail," as Dickens puts it. It was well covered with pine needles, except the front of the hive; had two frames of honey left; bees were clustered on top and near the top of three empty frames, and in each cell under the cluster is a bee wedged clear into the cell. I tried to cut them out, but couldn't cut across the top as the top row was full, and the pressure would make the foul contents of bees squirt all around. Are those combs of any use?

2. Can the bees be gotten out?

3. The colony was not a very strong one. What caused them to die? MASS.

ANSWERS.—1. If the combs were good before the bees died, they are still of value.

2. Yes. Some say mice will clean them out. If you keep the combs in a good, dry place, the bees may be pickt out with a pin after they are well dried, and some of them may even shake out. Or the bees themselves will make a pretty good job cleaning them out after they are dry.

3. Perhaps diarrhea. Possibly they starved. Even with plenty of honey left in the hive, they could make no use of it during a cold spell if it was out of their reach.

Nucleus Method of Increase.

I have one colony of bees, and want to increase them as many times as can be done with safety, next season. I do not want honey, but increase. NEBRASKA.

ANSWER.—In the matter of trying to make increase there are things to be taken into account that are all the time coming up, general principles that should be fully understood, or there's a chance to make a mess of it in a hundred different ways. As you mention the matter of "safety"—a thing often too little considered—perhaps the best way will be to work on the nucleus plan. The supposition is that your colony is in a frame hive. If the season is not a good one, you must count on feeding whenever it is needed. If your colony will be accommodating enough to swarm in good season, all right. If not, you must take the matter into your own hands. Take two frames of brood with the adhering bees and the queen, and put them in another hive on a new stand. That leaves the old colony queenless, but very strong, for you must not think of doing anything until the colony has become very strong. And it's so important to have good queens that you must not think of a nucleus having anything to do with a queen-cell till it's sealed. In about a week you may take the old hive from its stand and put in its place the hive that has contained and still contains the queen, filling up this hive with foundation if you haven't done so before. You may now divide the contents of the old hive into nuclei. Put one of them on the stand from which you have just taken the queen, and the others in new places. Each nucleus should contain two or three combs with adhering bees. One comb well filled with brood may do for one of the combs, or if the combs are not so well filled, it may need two or even three frames with brood. Of course each nucleus must have a sealed cell. You now have the old queen on the old stand with a fair supply of bees, for many of the field-bees will go back to the old stand, and you will have, perhaps, three nuclei. As soon as the old colony gets as strong as it was before, you may repeat the operation, and in course of time the nuclei first made may become strong enough so they can be used to strengthen. Remember that "safety" is your motto, and you're not to be fool enough to get a whole lot of weak nuclei started, and have none of them strong enough to amount to anything. Work your nuclei up into strong colonies as fast as you can, and don't draw from any of them till they have at least five or six frames of brood. You can go on making two or three nuclei at a time if you have a long, good season, and you can do something toward making a good season by feeding. If you have an 8-frame hive to begin with, it may be worth your while, before doing anything in the way of dividing, to give it a second story and try to have 10, 12 or more frames of brood.

A Case of Bee-Diarrhea.

A beginner in bee-keeping who is a neighbor of mine is in trouble. His bees have the dysentery, and he knowing me to take the Bee Journal, has requested me to write for advice as to what is best to do. IOWA.

ANSWER.—The disease called formerly dysentery, and now generally called diarrhea, is perhaps hardly a disease at all, in the strict sense of the word. It is a painful condition caused by the overloading of the intestines of the bee, and that being the case, the plain cure is to give the bees a chance to empty themselves. That's the only cure. As soon as a warm day comes, the bees will fly and empty themselves, for they are neat creatures and unwilling to soil their hives as long as it can possibly be avoided. Some have thought to hurry up matters when the weather was too slow, by taking the bees in a warm room and giving them a chance to fly. I'm not sure that it was ever a great success. But I have some little faith in warming them up thoroughly. When bees are in the cellar, it may be heated to 60 or 80 degrees, and then allowed to cool down again. If they are out-doors they can be brought in at night into a warm room, and the room allowed to cool down before daylight next morning, when they must be set back. But be sure the room is perfectly dark when they are warmed up. Your great hope will be in a warm day coming so they can fly.

The Solar Wax-Extractor.

Is the solar wax-extractor patented? If not, what is the size, and how is it made? ILLINOIS.

ANSWER—I know of no patent on the solar wax extractor. There are various sizes, and you can make them almost any way, so you keep the main principle in mind. That is, to have an enclosure covered with glass into which the sun can shine, with opportunity for the melted wax to separate from the slum gum or debris. A simple way is to have a box with a cover hinged on, a large pane of glass in the top of the cover, in the box a pan with a perforated bottom, in which to put the combs or scraps to be melted, and underneath this a pan to hold the melted wax.

Transferring and Dividing Colonies—Two-Story vs. One-Story Hives.

1. I have five box-hives with bees which I want to transfer in the spring to Champion chaff hives. Could I make an artificial swarm out of each colony at the same time when I transfer the bees? If so, please let me know how, and when would be the best time?

2. Is the Champion chaff hive a good hive?

3. Is a two-story hive as good or better than a one-story hive? NEW JERSEY.

ANSWERS.—1. You could divide a colony into two or more at the time of transferring, but it would hardly be advisable. You may, however, reach the same end in a better manner. Wait till the colony swarms, and hive the swarm in the new hive. Set the swarm in place of the old hive, putting the old hive close beside it. A week later, remove the old hive to a new place. Two weeks later still, or three weeks from the time of swarming, all the worker-brood will be hatcht out in the old hive, when it can be transferred to a new hive. The first one will be strong, and will give a good account in surplus honey if the season is favorable, the other one ought to satisfy you if it gets in proper condition for winter. Of course in a remarkable season it might yield surplus, and in a poor season it might have to be fed.

2. I have no practical acquaintance with the Champion hive, but I suppose it is a good chaff hive.

3. It all depends upon circumstances whether one story is as good as two. If only eight frames are in a hive, there are times when it will be much better to have two stories. With 10 or 12 frames in a hive, there is no great need of a second story, unless it be for surplus honey. Of course, if surplus receptacles are counted as second stories, then no one would think of doing with only one story, unless the long-idea hives are used, having perhaps 20 frames in one story.

Transferring—Cyprian Bees.

I have five colonies of black bees in box hives, and I want to transfer them as soon as possible into 8-frame dovetailed hives.

1. When is the best time to do it?
2. What time after transferring can queens be introduced?
3. Would you recommend Cyprian queens? SUBSCRIBER.

ANSWERS.—1. The time usually considered best is in fruit-bloom, but the belief is constantly gaining ground that it is better to wait till the colony swarms.

2. Any time.

3. I should not prefer them, but some like them.

Gathering Pollen Early—Perforated Zinc.

I purchast two colonies of hybrids in January, weighing about 50 pounds each, and moved them home, a distance of about 400 yards, the weather being brisk for about a week, then it moderated. They came out, and in a day or two they began bringing in pollen in large quantities. What were they gathering it from, as trees had no chance to bud or sprout? Or did they rob other bees? At the same time I found young brood which they had carried out, one of them matured only a crippled wing, showing they were rearing brood some time before.

2. I want to transfer them into movable-frame hives in the spring, and am making excluding-boards of perforated zinc-strips and wood-slats, alternately, the strips perforated with one row of square-cornered holes 17-100 x 9-16. Are they as good as two rows and round ends? MISSOURI.

ANSWERS.—1. The pollen carried in could not be from robbing other bees. When they rob it's honey they're after, not pollen, and the pollen that's in the hive they couldn't pack on their legs. It isn't easy to say what the pollen was gathered from without knowing the resources of your neighborhood. Pollen may be had from some plants and trees when you would think not a bud has started. Willows and hazels blossom and yield much pollen when the leaf-buds show no sign of starting. In some places skunk-cabbage is the first thing to yield pollen.

2. I doubt if you can detect any difference between one row and two rows, or between holes with round and square ends.

Management of Transferring.

1. I have 20 strong colonies of bees in large box-hives where I want to start an out-apiary. I have 8-frame dovetailed hives on hand to transfer them in next summer. I don't want them to swarm, as I could not be there to care for them. When would you transfer?

2. Can I "drive" them just before the swarming-season, and get nearly or quite as good results as by natural swarming?

3. Would you wait three weeks before making the next "drive," or drive out a few every week for three weeks?

4. Hived on starters, how many days would you wait before putting on the boxes, not using any excluders?

5. Do you think they would swarm during a honey-flow of about six weeks?

6. Can you suggest a better plan to get a crop of honey and keep down swarming? CONN.

ANSWERS.—1. Transfer in fruit-bloom.

2. In most cases probably not quite as good, but nearly so.

3. You were talking in the first place about transferring, but this is a different thing. It will be simpler to wait three weeks instead of making several "drives," and perhaps better.

4. Perhaps two.

5. Hardly, after being thrown on starters.

6. That's a hard question, to know how best to keep down swarming and get the most honey if you're running for comb honey. Study thoroughly your text-books, and have the general principles as familiar as A B C, and then you'll be better able to know just what will suit your case. If you are running for extracted honey it's much easier. In that case a plan highly commended by some, is to put one comb of brood with queen and adhering bees in the lower story, filling up with frames of foundation, and putting the remaining brood and bees in a second story with an excluder between.

☞ See "Bee-Keeper's Guide" offer on page 125.

GENERAL ITEMS

How to Sell Honey.

I have sold over 5,000 pounds of honey at retail, and have calls every day for more. My method of selling is to put 10 pounds in a tall gallon crock, and sell it for 90 cents, jar and all. Let every bee-keeper do the same, and less honey would go begging for a market in the large cities.

Lenawee Co., Mich. C. A. Huff

[Mr. Huff evidently practices what he preaches. Others could go and do likewise in the way of selling honey. When your own crop runs out, send for some of the alfalfa and basswood honey we offer in these columns. A small sample of either by mail, for 8 cents, to cover postage and packing.—Editor.]

High or Low Elevation for an Apiary.

In the answer to Maine on the above question, on page 54, Dr. Miller says he will yield the floor to any one who can throw light on the subject. I am unable to fully answer the question, but my experience may throw on a little light.

Last spring I placed two colonies of bees on the roof of an eight-story factory in Brooklyn, near the East river, and they gathered for me 150 pounds of nice comb honey, and I do not think they would have done better if they had been on the ground. I am wintering them on the roof, well protected. They are in good condition, and all right now—Feb. 7. Brooklyn.

A Report for 1897.

I commenced in the spring of 1897 with 15 colonies; I had six swarms, increasing to 21, and got about 46 pounds of surplus honey from most of them, tho I didn't get more than 25 or 30 pounds from some. They gathered honey very fast in the fore-part of the season, tho it was too dry in the fall at the time that we get our best honey. We have a fine fall honey weed here, tho I don't know the name of it. It yields the finest honey that I ever saw. It grows very tall and has a fine bloom. It is a little like the boneset.

Hurrah for the American Bee Journal! I don't see how I can do without it. We have been taking six regular papers for a long time, and when they get here the Bee Journal is the first and the last one that I read. W. W. Bucy.

Calloway Co., Ky.

Results of the Last Season.

I like the Bee Journal better every year, and always look forward to the night it arrives with pleasure. I have learned all I know from it, and would like to see more of my bee-keeping friends subscribe for it. Last season was the best I have had; from two colonies of Italians I took 252 pounds of extracted and 28 of the whitest and best-filled sections I have ever seen. After taking off the sections I put on a second story with ten frames half filled with foundation; eight days after I extracted nearly 60 pounds, making a total of 96. Another colony built their combs, and I extracted 156 pounds from them. I averaged 56 pounds of comb honey per colony. My bees are all Italians, in 10-frame Langstroth hives. I am making a few 12-frame hives. Mine are all double-walled, packt with two inches of chaff. I believe in large hives.

Ontario, Canada. James Laidlaw.

Bee-Keeping in South America.

I read the Bee Journal with the greatest interest, but sometimes it is difficult for me to understand how old, settled questions, as about the necessity of comb foundation,

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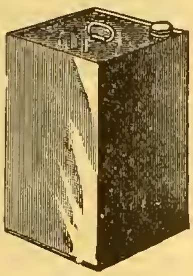

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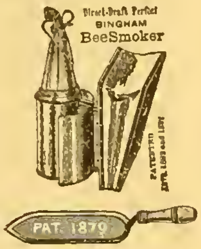

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Large	2½-in. stove.	Doz. 5.00;	"	.90
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January 27, 1897. Truly, W. H. Eagerty, Cuba, Kansas.

Mr. Bingham, Dear Sir:—Please send per mail a 4-inch Smoke Engine. I have one of your Smokers; it is too small in time of trouble.

February 21, 1898. A. F. Seward, Riverside, Calif.

9A9t **T. F. BINGHAM, Farwell, Michigan.**

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44A26t Please mention the Bee Journal.

Home for Sale—A Home in California

On account of almost total loss of eyesight I am compelled to offer my fruit ranch and apiary for sale or exchange. For further particulars address **E. B. BEECHER,**
6A4t AUBURN, Placer Co., CALIF.
Please mention Bee Journal when writing.

WANTED A young single man capable of taking care of an apiary consisting of 250 or 300 colonies of bees. Must give good references and none but a thoroughly competent man need apply. Address, **The Gila Farm Co.** Cliff, Grant Co., N.Mex.

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can be ventilated again. I cannot understand how bee-keepers can do without foundation. I have about 300 colonies, and make a business of them, and would really not know how to manage them alone with my daughter without comb foundation.

Bees are very cross here in summer-time. We have black bees. I believe the Spaniards brought them into this country.

People who dream about the stingless bee should know that those bees are not really bees (Apis melifica), but *meliponas*. There are many classes. One I know does not sting, but crawls in one's hair and beard, gives very little honey (in small pots like a thimble), and the wax is soft and different from beeswax. I have heard about the other classes, too. Some of them fight and bite terribly, much worse than honey-bees. They live altogether in hot climates, and it would never pay to domesticate them, as they produce very little honey. J. NOELTING.

Buenos Aires, South America.

◆

Early Spring and Fruit-Bloom.

We are having a very early spring, and if this weather lasts 10 days longer, bees will swarm before. Plum and peach trees are in full bloom here now, and the weather is like the mouth of May. I have 13 colonies, and they are in good condition, and storing honey every day. I examined them today. C. R. WEST.

Ellis Co., Tex., March 8.

◆

A Bee-Keeper in Trouble.

Last October we had a big rain, but since then we have had hardly any. It has been dry until now (Jan. 12). We have just had a good rain, about 1½ inches, which gives us in Southern California hope for a good honey-year if it keeps on raining occasionally.

I have now 200 good colonies of bees. Last winter I lost a good many by neighbors who went on my land in my apiary and tipt over my hives. Now they have sued me as a criminal for keeping bees on my own land from where the bees fly off to others' land. I am right in the foothills, and the mountains back of them; there are other bees and apiaries around me, but they don't say anything about them. I have my case appealed to the superior court. I'd like to know how I can be a criminal when legally holding property—bees and land—and make an honest living from my bees and pay taxes on them. But the neighbors wanted to destroy my bees and my living. I shall fight for my rights.

Last spring I had about 60 colonies left; 36 were very strong in March, so I took bees from them and made the weak ones stronger. I got 13,000 pounds of extracted honey, all light amber, and increast my bees to 200 colonies. Most of them are now in good condition, but the price of honey is discouraging—3½ cents per pound. FRANK S. BUCHHEIM.

Orange Co., Calif.

◆

Sowing and Growing Alfalfa.

I have noticed of late that there have been a number of enquiries in regard to this plant, as its virtues as a honey and fodder crop are unsurpast in any locality where it will grow as a honey-plant. It needs a moderately-dry climate, and in a dry, irrigated district where there is an abundance of water that can be poured over the surface of the soil. This supplies the roots with sufficient moisture, and produces a vigorous growth, then if there is no rain to wash the nectar out of the blossoms—under those conditions I believe it is at the top of the list as a honey-plant.

In reply to enquiries as to when and how to plant: Where there is no danger of frost, sow in the fall; where that danger exists, preparing the ground in the fall is best. The next best is as early as possible in the spring. The soil should be as fine as it can be reasonably made, and I believe the earlier it can be sown, within reason, the better. It can be sown alone or with

Sweet Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Sweet Clover (white).	.60	$1.00	$2.25	$4.00
Alsike Clover........	.70	1.25	3.00	5.75
White Clover.........	.80	1.40	3.00	5.00
Alfalfa Clover.......	.60	1.00	2.25	4.00
Crimson Clover.......	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

GEORGE W. YORK & Co.
CHICAGO, ILL.

Southern Home of the Honey-Bee

Is now ready for your orders for QUEENS of either **3 or 5 Banded Italians and Steel Gray Carniolans.** More than 300 Tested Queens to begin with. Untested, either race, 75 cts. each; June and until October 50 cents each. Tested $1.00 each. Good Breeders, $2 each. Straight 5-Banded or "Faultless" Queens, $5.00 each. Satisfaction guaranteed.

GEO. W. HUFSTEDLER,
Successor to Hufstedler Bros.,
3Atf BEEVILLE, Bee Co., TEX.
Please mention Bee Journal when writing.

Muth's HONEY-EXTRACTOR Square Glass Jars.

Root's Goods at Root's Prices.

BEE-KEEPERS' SUPPLIES in general, etc etc, Send for our new catalog. **Practical Hints"** will be mailed for 10c. in stamps. Apply to—

Chas. F. Muth & Son, Cincinnati, Ohio.
Please mention Bee Journal when writing.

OUR PRICES are worth looking at. We are making the new

Champion Chaff-Hive

with dovetailed body and supers, and a full line of other Supplies, and we are selling them CHEAP. A postal sent for a price-list may save you $ $ $ $

R. H. SCHMIDT & CO.,
Box 187 SHEBOYGAN, WIS.
Please mention Bee Journal when writing.

☞ IF YOU WANT THE

——BEE-BOOK

That covers the whole Apicultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keeper's Guide.

Liberal Discounts to the Trade.

PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y.
Please mention Bee Journal when writing.

BEE-KEEPERS! Let me send you my 64-page Catalog for 1898.
J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing.

BUY REID'S TREES

Prices were never before so low—stock was never better. Everything in the REID NURSERIES is healthy, well rooted, fully up to grade. You will get exactly what you want at *one-half price.* Write for estimates, suggestions, illustrated catalogue. Try the *STAR STRAWBERRY* and *ELDORADO BLACKBERRY.*

REID'S NURSERIES, Bridgeport, Ohio.

Listen! Take my Advice and Buy Your Bee-Supplies of August Weiss!

FINE FOUNDATION AND TONS OF IT. Working Wax into Foundation a Specialty.

I DEFY competition in Foundation

Millions of Sections—Polisht on both Sides!!

SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalogue and be your own judge. Wax wanted at 26 cents cash, or 28 cents in trade, delivered to me.

AUGUST WEISS, Hortonville, Wisconsin.

To Seed Buyers

There are 3 classes of Seed Catalogs.

One class caters to the patronage of those who are mislead by overdrawn pictures and statements that are untrue. Another class takes advantage of the fears of those, who, through a natural desire to secure the best seeds, will pay fancy prices for what often proves to be very ordinary stock. **THERE IS YET ANOTHER** class which seeks the trade of those, who want the best seeds possible to obtain and are willing to pay a reasonable price for them. **TO THIS CLASS OUR CATALOGUE BELONGS.** It is mailed FREE to those who write for it.

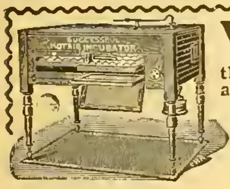
Shaw's System of Pasturing Sheep....

This pamphlet is given away to our customers.

NORTHRUP, KING & CO., Seedsmen,
26 to 32 Hennepin Ave.
Minneapolis, Minn.

N-K&Co's
STERLING
GRASS & CLOVER
SEEDS
RECLEANED AND TESTED

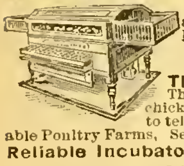
Our STERLING Brand of Grass and Clover Seeds represent the best qualities obtainable.

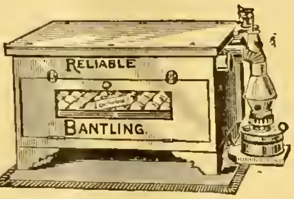


WHERE OTHERS FAIL

the **SUCCESSFUL INCUBATORS** succeed. why? because they are properly constructed and the correct methods for operating them are plainly set forth in our 72 page Direction Book. Our machines will please you. Prices reasonable. All sold under a positive guarantee which we ask you to compare with others. Send 6c stamps for 128 page catalog and poultry book combined. *It will pay you.* Address

DES MOINES INCUBATOR CO., Box 78, Des Moines, Iowa.





THE HATCHING HEN HAS LOST HER OCCUPATION

and in the production and brooding of chicks she has been supplanted by the better and everyway

RELIABLE INCUBATORS AND BROODERS

They Hatch and Brood when you are ready. They don't get lousy. They grow the strongest chicks and the most of them. It takes a 224 page book to tell about these machines and our Mammoth Reliable Poultry Farms, Sent by mail on receipt of 10 cents. Send for it now.

Reliable Incubator and Brooder Co., Quincy, Illinois.

37D17t Please mention the American Bee Journal.

Ho, for Omaha!

LEAHY MF'G CO. INDEFATIGABLE HIGGINSVILLE, MISSOURI.

As we have many customers in the Northwest, and believing they will appreciate the low freight rates obtained by purchasing goods from a railroad center nearer to them than we are, getting a direct through-freight rate, thus cutting the freight in half, we have establisht a branch house at 1730 South 13th St., Omaha, Neb., where we will keep a complete line of all Apiarian Supplies, the same as we do at Higginsville, Mo. With the quality of our goods, we believe most bee-keepers in the West are already acquainted. but to those who are not, we will say that our goods are par excellent. Polisht, snowy-white Sections, beautiful. straw-colored transparent Foundation, improved Smokers and Honey Extractors, and all other first-class goods, are what we sell. Kind and courteous treatment and honorable dealing our motto. On these bases, we solicit an order. feeling sure that if we sell you one bill of goods you will be our customer in the future.

☞ PROGRESSIVE BEE-KEEPER, 50c per year. "Amateur Bee-Keeper," 25c. Both for 65c., postpaid. Sample copy of the PROGRESSIVE free. and a beautiful Catalog for the asking.

Address, **Leahy Manufacturing Company,** Higginsville, Mo., or 1730 South 13th St., Omaha, Neb.

POULTRY PAPER, illus'd, 20 pages, 25 cts. per year. 4 months trial 10 cts. *Sample Free.* 64-page practical poultry book free to yearly subscribers. Book alone 10 cts. **Catalogue** of poultry books free. *Poultry Advocate*, Syracuse, N.Y

10E6t Please mention the Bee Journal.

QUEENS Untested, after April 1, $1; Tested $1.50; Select Tested, $2. Imported queens. direct from Italy. $5 each. The best of stock, either Golden or Leather Colored. Write for price-list. HUFFINE & DAVIS,
11A4t Ooltewah, Tenn.

Please mention Bee Journal when writing.

wheat or oats. If sown early so as to catch the spring rains, I would sow about 18 to 20 pounds to the acre; if sown late or with other crops, I would put on 23 pounds; for if it is sown with grain, and it should happen to be a very thick stand, it may smother some of the alfalfa. It needs more moisture the first season than afterwards. A rain after the grain is taken off will give a vigorous start. With us, if we sow it with grain, as soon as the grain is off, we turn the water on for a few hours, and the result is that we soon have a green field.

Nearly all farm animals will eat alfalfa and grow fat on it, either in its green or dry state; thus, if it does not pay as a honey-plant where it will grow, it will pay as a fodder crop. Its only danger is bloat when fed in its green and wet state.

Salt Lake Co., Utah. E. S. LOVESY.

The Nickel Plate Road

changed time and also depots March 6, 1898. All trains now arrive and depart from Van Buren Street Station, near Clark St., Chicago. All trains on "L" loop stop at Nickel Plate Depot. City Ticket Offices, 111 Adams Street, and Auditorium Annex. Telephone Main 3389. (5) 11A2t

Convention Notices.

Texas.—The Texas State Bee-Keepers' Association will hold its annual convention at W. R. Graham & Son's, Greenville. Texas, the first Wednesday and Thursday in April, 1898. All interested are invited.

W. H. WHITE, Sec.

Utah.—The Utah State Bee-Keepers' Association will hold its semi-annual convention in the City and County Building, Salt Lake City, April 5, 1898. at 10 a.m. A full program in the interest of the industry will be presented. It is very desirable to have all parts of the State represented. Among other things to be considered is the transportation and marketing of our products. and also the adoption of the best plan to represent our State at the Trans-Mississippi Exposition, and to get our new foul brood law into active operation. Every bee-keeper should be interested in these matters. All are cordially invited. In case there may be any that cannot attend, we would be pleased to have their address, and have them send in questions on general topics. Several members of the Association have desired us to again call the attention of our bee-keepers to the Langstroth monument fund. Any who feel able should throw in their mite to mark the last resting-place of this the greatest of all American bee-keepers. No one will feel as if it was labor in vain, who takes a fraternal interest in this desirable object.

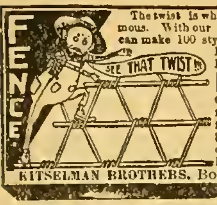
JOHN B. FAGG. Sec., East Mill Creek. Utah.
E. S. LOVESY, Pres., Salt Lake City, Utah.

Chicago's Favorite Passenger Station.

Reasonable success seems to have followed the efforts of the management of the Nickel Plate Road to make it popular as a passenger line for travel East. It is regarded as a favorite by many in making the journey from Chicago to Eastern points.

Patrons of that line will be gratified to learn that arrangements have been made, effective Sunday, March 6, for all passenger trains of the Nickel Plate Road to arrive at and depart from the Van Buren St. Station in Chicago.

The many advantages afforded by this Great Union Depot, located in the heart of the business portion of Chicago, and the continued advantage afforded by lower rates than over other lines, having three Express Trains daily, with through Sleeping Cars to New York and Boston, and the advantage of superior Dining Car Service, when all considered, should show increast travel over the Nickel Plate Road. (8) 11A2



The twist is what makes the Kitselman Fence famous. With our Duplex Automatic Machine you can make 100 styles and 60 rods per day of the Best Woven Wire Fence on Earth, Horse-high, Bull-strong, Pig-tight

FOR 18c PER ROD

Chicken fence 19c. Rabbit-proof fence 16c. and a good Hog fence for 12c. per rod. Plain, Coiled Spring and Barbed Wire to farmers at wholesale prices. Catalogue FREE for the asking. Address.

KITSELMAN BROTHERS, Box 138 Ridgeville, Indiana.

45Dtf Please mention the Bee Journal.

Queens, Bees and Bee-Keepers' Supplies

Tested Queens in April and May, $1.00. Untested, 75c. Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

F. A. CROWELL,

8Atf GRANGER, MINN.

Please mention Bee Journal when writing.

METAL WHEELS

in all sizes and varieties, to fit any axle. They last forever. Either direct or stagger spoke. Can't break down; can't dry out· no resetting of tires. Good in dry weather as in wet weather. Send for catalog & prices. ELECTRIC WHEEL CO., Box 16 QUINCY, ILL.

Please mention Bee Journal when writing.

Large Apiculture Establishment

[Establisht 1860] for the Rearing and Export of **Queen-Bees**—Pure, Selected Italian kind. CAV. PROF. PIETRO PILATI, via Mazzini No.70, BOLOGNA [ITALY.]

Price List: March, April, May, 1 Tested Queen, $1.75; 6, $9 25; 12, $18. June, July, August, $1.25, $7, $14, September, October, November, $1, $5.75, $10. Orders must be prepaid and accompanied by Post-Office Money Orders. Please state Names, Addresses and Railway Stations in a legible manner. Should a queen-bee die during the journey, the same must be returned accompanied by a Post-Certificate, and another queen-bee will be sent immediately instead.

Please mention Bee Journal when writing.

Gardener and Bee-Keeper Wanted

On a Farm in New Hampshire. Must have experience in both lines. Good character and habits, sober, industrious and trustworthy. Engagement for six months or longer, beginning about April 1.

Address J. J. G., 1800 Prairie Ave., Chicago.

11A1t Please mention the Bee Journal.

FINE RESIDENCE FOR SALE AT A BARGAIN,

Comprising one of the best located apiaries in Wisconsin, known as Pleasant Grove Apiary. There are 3½ acres of land, with a good house of 10 rooms finisht in oak, hard-oil finish; barn, shop, a fine collection of fruit, 100 colonies of bees with all fixtures. Will be sold at a sacrifice, as I have business in the East, requiring me to sell. Correspondence solicited.

J. MESSINGER, Elroy, Juneau Co., Wis.

11A1t Please mention the Bee Journal.

TAKE THE BIG FOUR!

Prize-Winning Golden Italian Queens.
Best Seed Corn in Ohio.
Seed Potatoes at living prices.
Choice Plymouth Rock Eggs.

Catalogue Free.

J. F. MICHAEL, Greenville, Ohio.

11Dtf Please mention the Bee Journal.

BEES! Florida Italian QUEENS!

Tested Queens, $1.00 each; Untested, 50c. 2-Frame Nucleus of Bees with good Queen $2. Prompt and satisfactory dealing.

Address, **E. L. CARRINGTON,**
11Atf De Funiak Springs, Fla.

FOR SALE 100 colonies of **BEES** in Langstroth and Root's Dovetailed Hives. Will sell in lots to suit purchasers, and deliver on cars for shipment to any point. For further information address, J. W. HOWELL, Kenton, Tenn.

10A2t Please mention the Bee Journal.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Ill., Mar. 8.—A little fancy white sells at 11c. if free from any indication of graining, but the majority of white honey sells at 10c., with off grades at 8 to 9c.; amber is not selling readily at 8c.; dark, 7 to 8c. Extracted, white, 5 to 6c.; amber, 4½ to 5c.; dark, 4c. Beeswax, 26 to 27c., and in active demand. The weather is now suitable for shipments of comb.

Milwaukee, Wis., Mar. 8.—Fancy, 11 to 12c.; A No 1, 10 to 11c.; No. 1, 10 to 10½c.; No. 2, 9 to 10c.; amber and dark, 7 to 8c. Extracted, in barrels, kegs and cans, white, 5 to 6c.; dark, 4½ to 5c. Beeswax, 25 to 27c.

We are able to report an improved demand for fancy honey during the past few days, while the medium grades have also sold better, yet the surest sale is on the BEST. The supply continues equal to the demand, but the fancy grades are not in as good supply as the low and medium, which goes to prove that the fancy sells best—and the values better

Buffalo, N. Y., Mar. 11.—There is a good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand.

New York, N. Y., Feb. 9.—There has been a fair demand for comb honey of late, and we are gradually reducing our stock. Fancy white is scarce and finding ready sale at 10 to 11c.; off grades white and amber, 8 to 9c.; mixt and buckwheat, 6c. Extracted is in fair demand—California white, 5½c; light amber, 5c.; white clover and basswood, 4¾ to 5c.; buckwheat, 4c.; Southern, 50c. a gallon. Beeswax is steady at 26 to 27c.

Cincinnati, Ohio, Feb. 21.—There is a slow demand for all kinds of honey. We quote 10 to 13c. for best white comb honey, and 3 1-2 to 6c., for extracted. Beeswax is in fair demand at 20 to 25c. for good to choice yellow, with a fair supply.

Cleveland, Ohio, Feb. 22.—Fancy white, 12 to 13c.; No. 1, 11 to 12c.; No. 1 amber, 9 to 10c. Extracted, white, 6 to 6½c.; amber, 4 to 5c. Beeswax, 22 to 25c.

Kansas City, Mo., Feb. 19.—Fancy white comb, 1-lbs., 10c.; No. 1, 9 to 10c.; amber, 8 to 9c.; dark, 7 to 8c. Extracted, white, 5 to 5 1-2c.; amber, 4 1-2 to 5c.; dark, 4c. Beeswax, 20 to 22c.

The supply of honey is large and the demand light.

St. Louis, Mo., Feb. 9.—Fancy hite comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

Detroit, Mich., Feb. 1.—Fancy white, 11 o1 13c.; No. 1, 10 to 11c.; fancy amber, 9 to 10c.; No. 1, 8 to 9c. Darker grades are selling lower and in better supply, and can be bought at 6 to 7c. Extracted, white, 5 to 6c.; darker grades, 4 to 5c. Beeswax is in good demand at 26 to 27c.

Indianapolis, Ind., Jan. 15.—Fancy white, 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand.

Boston, Mass.; Jan. 18.—Fancy, in cartons, 12½ to 13c.; in glass, 11 to 12c.; A No. 1, 10 to 11c.; No. 1, 9c.; No. 2, 8c.; No. 3, no sale. Beeswax, 27c.

The demand for honey is light on all grades, with a full supply. Pure beeswax is in good demand, but supply is light.

Philadelphia, Pa., Jan. 18.—Fancy white, 10c.; No. 1, 9c.; amber, 8c. Extracted, white, 5c.; amber, 4c.; dark, 3¾c. Beeswax, 28c.

Late arrivals of California honey have demoralized our market.

Minneapolis, Minn., Jan. 31.—Market is in an overloaded condition on comb honey. Good chance for fancy white extracted at 5¾ to 6c., but comb is at a standstill, particularly if other than fancy white. Best price available on fancy white comb is 10½c., and buyers are slow at that. Darker grades or broken lots are unsalable. If shippers would send in their extracted when it is wanted, and not push undesired comb [and vice versa] the stuff would move more advantageously to all concerned. The trouble is, when a fair price is obtainable some shippers hold out for more and in the end lose by it.

$100

Given as Bounties to purchasers of the improved Danz. Hives and Sections See schedule in my bee-book "Facts About Bees." Tells how to produce honey that sells for the most money. Free for 2c in stamps. Address

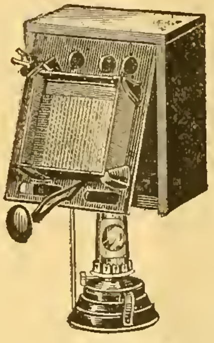
THE A. I. ROOT CO., Medina, Ohio,
or F. DANZENBAKER, Box 466, Washington, D. C.

BEES, HONEY, MONEY

Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

J. P. H. BROWN, Augusta, Ga.

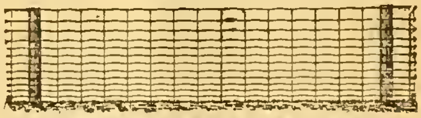


MAGIC PRESS

& HOT PLATE FOUNDATION FASTENER.

This Press is of malleable iron and brass. Non-breakable chimney. Its speed equal to 4000 per day, or more, according to activity of operator. One closing and opening of gate finishes the section. Starters or full sheets. This year a Fine Egg-Tester goes with it. Write me if your supply dealer does not keep them in stock.

JAMES CORMAC,
3Dtf DES MOINES, IOWA.

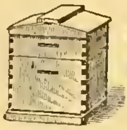


THIS WAR TALK

caused by Cuban troubles calls attention to our public defenses. Say, are your crops and pasture lots **well fortified?** Send us measurements and get our '98 prices. See our ad. in next issue.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Please mention Bee Journal when writing.



BEE-KEEPERS' SUPPLIES!
Largest and Best equipt Factory in the
SOUTH-WEST.
Send for Catalog.

FRED A. DALTON,
1A26t WALKER, Vernon Co., Mo.

Please mention Bee Journal when writing.

Texas Queens

Best honey-gathering strain in America. Tested, $1.50. Untested, $1.00. Write for a Circular. **J. D. GIVENS, Lisbon, Tex.**

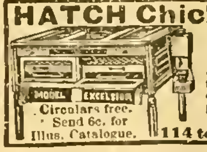
7A26t Please mention the Bee Journal.

Watch POUDER'S AD

SEE THAT WINK!

Bee-Supplies! ROOT'S GOODS at Root's Prices.

Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Cattree. Walter S. Pouder, 512 Mass. Ave., INDIANAPOLIS, INDIANA.



HATCH Chickens BY STEAM— With the MODEL EXCELSIOR Incubator

Circulars free. Send 6c. for Illus. Catalogue.

Simple, Perfect, Self-Regulating. Thousands in successful operation. **Lowest priced first-class Hatcher made.**

GEO. H. STAHL,
114 to 122 S. 6th St., Quincy, Ill.

44A26t Please mention the Bee Journal.

Talk about ....Comb Foundation

WE can now furnish the very best that can be made from pure wax. **Our New Process of Milling** enables us to surpass the previous efforts of ourselves and others in the manufacture of Comb Foundation.

It is always Pure and Sweet.
It is the kind that does not sag.
It is the kind you want.

If you once try it you will have no other. Samples furnisht **FREE.** Large illustrated Catalog of all kinds of

Bee-Keepers' Supplies,

And a copy of the American Bee-Keeper, sent upon application. Address,

THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

NEW YORK, is the city,
105 Park Place, is the street,
I. J. STRINGHAM, is the man

Who is prepared to ship you, on short notice, **anything** in the apiarian line.

Are YOU the man who wants to buy?

☞ Send for Catalog, anyway.

Please mention Bee Journal when writing.

CARLOADS—

Of Bee-Hives, Sections, Shipping-Cases, Comb Foundation, and **Everything** used in the Bee-Industry.

We want the name and address of every Bee-Keeper in **America.** We supply Dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment.

Write for Catalogs, Quotations, etc.

Inter-State Manufacturing Co.,
HUDSON, St. Croix Co., WIS.

Please mention Bee Journal when writing.

The A. I. Root Co.'s Goods Wholesale. Retail.

Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**
Cash for Beeswax. BELL BRANCH, MICH.

Please mention Bee Journal when writing.

I ARISE

TO SAY to the readers of the BEE JOURNAL that **DOOLITTLE** has concluded to sell —BEES and QUEENS— in their season, during 1898, at the following prices:

One Colony of Italians on 9 Gallup frames, in light shipping-box	$6 00
Five Colonies.....	25 00
Ten Colonies......	45 00
1 untested queen.	1 00
6 " queens	5 50
12 " "	10 00
1 tested Queen...	$1 50
3 " Queens.	3 50
1 select tested queen	2 00
3 " " Queens	4 00
Select tested queen, previous season's rearing..	3 00
Extra Selected for breeding, THE VERY BEST..	5 00

About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

—0—

☞ Circular free, giving full particulars regarding the Bees and each class of Queens.

Address
G. M. DOOLITTLE,
11A25t BORODINO, Onon. Co., N. Y.

21st Year **Dadant's Foundation.** 21st Year

Why Does It Sell So Well?

Because it has always given better satisfaction than any other.
Because **IN 21 YEARS** there have not been any complaints, but thousands of compliments.

We Guarantee Satisfaction.

What more can anybody do? **Beauty, Purity, Firmness, No Sagging. No Loss. PATENT WEED PROCESS SHEETING.**

☞ Send Name for Our Catalog, Samples of Foundation and Veil Material. We sell the best VEILS, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

LANGSTROTH ON THE HONEY-BEE, Revised.
The Classic in Bee-Culture—Price, $1.25, by mail.

CHAS. DADANT & SON,
HAMILTON, Hancock Co., ILL.

Please mention the Am. Bee Journal.

OUR MOTTO—"Well Manufactured Stock! Quick Shipments!"

SECTIONS, SHIPPING-CASES,
—AND—
BEE-KEEPERS' SUPPLIES.

We make a specialty of making the very best Sections on the market. The **BASSWOOD** in this part of Wisconsin is acknowledged by all to be the best for making **the One-Piece Honey-Sections**—selected, young, and thrifty timber is used.

☞ Write for Illustrated Catalog and Price-List FREE.

MARSHFIELD MFG. CO., Marshfield, Wis.

Please mention the American Bee Journal when writing.

Reduced Prices

On 1896 Style Hives.

In order to make room for stock of New Goods at our Chicago Branch, we offer the following list of 1896 Hives at these reduced prices to close out quick:

		5	10	20
15 No. 3E..........	8-frame..............	$5.00	$9.00	$17.00
40 No. 1	"	5.00	9.00	17.00
5 No. 1E, P. W.....	"	4.00	7.00	13.00
75 No. 1, "	"	5.00	9.00	17.00
55 No. 5E..........	"	5.00	9.00	17.00
25 No. 5..........	"	6.00	11.00	21.00
15 No. 6E..........	"	4.00	7.00	13.00
20 No. 6..........	"	5.00	9.00	17.00
30 No. 5E..........	10-fr.	5.50	10.00	19.00
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25 Townsend Section-Presses..............				50 cts. each.
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Note.—The 1896 No. 5 Hives include a honey-board as well as foundation starters, and the No. 5E have these omitted. The No. 6 have the D section-case arrangement, complete with sections and starters; and the No. 6E the same, without the sections and starters.

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AMERICAN
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BEE JOURNAL.
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

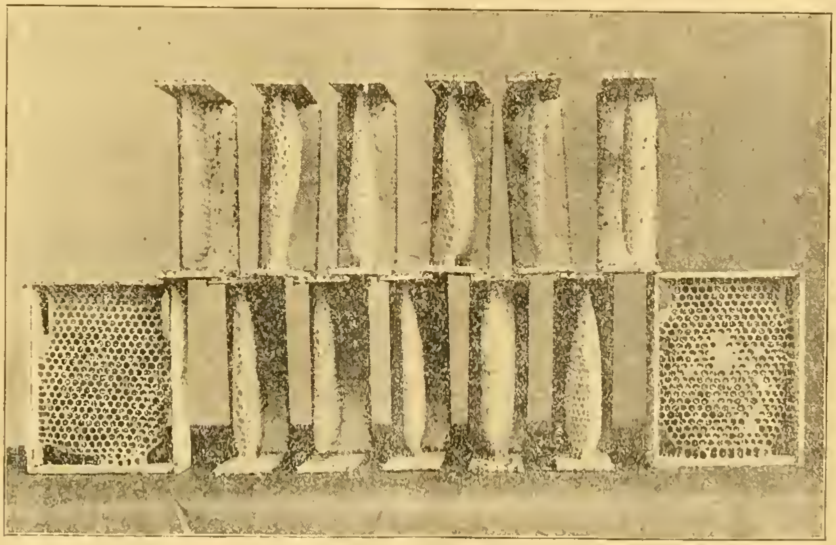
Publisht Weekly at 118 Michigan St. GEORGE W. YORK, EDITOR. $1.00 a Year—Sample Copy Free.

38th Year. CHICAGO, ILL., MARCH 24, 1898. No. 12.

CONTRIBUTED ARTICLES

Something About the No-Wall Comb Foundation

Since so much has been said in regard to the possibility of producing foundation with deep walls, there has been considerable discussion of the advisability of using such foundation, and very plausible arguments have been brought forward in support of it, but also of the opposite, or of a foundation without side-walls at all for the honey-sections. The greatest objection to high-wall foundation is the possible production of comb honey in which the septum would be heavy. As a matter of course, if the foundation was made as thin as the bees produce it naturally, the objectionable feature would be avoided, but it is yet a problem whether this kind of foundation may be produced in merchantable quantities. Meanwhile, I have noticed that the advocates of no-wall foundation are out-spoken, and show a desire of further experiments in this line.



Unfinisht Combs Built from No-Wall Foundation.

In the last January Bee-Keepers' Review, two different persons report on this foundation which was tried last year. The greatest objection seems to come from the foundation curling or warping when given to the bees. As this experimental no-wall foundation was made in our shops, I believe that we can throw some light upon the subject, and show how the difficulty above-mentioned may be avoided.

I will say first that there is no doubt that the very lightest foundation that can be made by machinery will be sufficient, and will carry the weight of bees, if it is allowed to cool or temper long enough before it is put into the hive. The aim that will be attained by using an exceedingly light grade will be the avoidance of the well-known "fish-bone." A foundation with little or no cell-wall will be much more readily modeled by the bees even if it did not come out of the hands of the manufacturer in thinner sheets than other grades. Hence the result reported that the comb built on a no-wall foundation seemed about as thin as natural comb.

Now as to the warping of this foundation, it comes from a very simple fact. When the sheet of wax comes out from between the rolls of the mill, there is nothing to draw it to either roller, the result being that it sticks alternately to each and "*warps*" as it comes out. We have long ago noticed that foundation which sticks unevenly to the rollers as it is milled, sticking partly to one and partly to the other, or first to one and then to the other, does not prove satisfactory in the hive. As we were both apiarists and manufacturers of foundation, and making a specialty of both, this was one of the first things we ascertained years ago. No matter how you may smooth it down, the sheet which has warpt in the mill will warp in the same way in the bee-hive. The deeper the cell-wall the more damage to the sheet if it is warpt as it comes out. In our practice we never allowed a single sheet which did not stick uniformly to one roller to go to the shelf, but all such sheets were mercilessly re-melted. With the no-wall foundation, if we were to remelt the sheets that warp in coming out, tho they do not warp to a great degree, we would not produce a single sheet.

The remedy for this is not difficult to find. Let one of the rolls of the mill have a rudiment of cell-wall, just enough to make the sheet fasten to this roll more than to the other, and you will have sheets of foundation which will not so readily warp in milling, and which will therefore warp but little if any in the hive. The sheet of foundation without cell-wall at all can hardly be handled in warm weather without warping. It is, to use the expression of Mr. Vandervort, "like a rag" in your hands. With a little cell-wall, be it ever so little, it will have more firmness, and will stand handling. But let it be remembered, if you handle a sheet of foundation and get it slightly out of shape, no matter what you may do, it will return to that shape when hung freely in the hive.

If foundation with such a cell-wall as above-mentioned was found acceptable and desirable, it cound be produced thin enough to fill about 135 sections to the pound, and do good work. C. P. DADANT.

Hancock Co., Ill.

[Mr. T. F. Bingham, who was instrumental in bringing out the no-wall comb foundation, sends us the following regarding his experiments with it in 1897.—EDITOR.]

The Michigan No-Wall Comb Foundation.

The various efforts to produce a foundation which would be acceptable to the bees as well as those who use honey, demonstrates beyond belief the great value of foundation in a general sense. But as neither the bees nor consumers hitherto have been entirely satisfied, the experiments go on. The Michigan convention last year took the no-wall idea and carried it to a conclusion. The convention had a no-wall machine adapted to the Weed process, constructed and supplied such foundation to the members who wisht to experiment with it. Several availed themselves of the opportunity, and used sufficient amounts to fully demonstrate that the bees did not gnaw it down, and that they did accept it promptly. As these two points were the only ones bee-keepers regarded as dangerous, the experiments may be justly regarded as a success.

While such results were to a certain extent satisfactory, they did not cover the ground or explain why obtained. One fact was perhaps more clearly demonstrated than any other. Among the hundreds of sections filled, not one had the patches of drone-size cells, showing conclusively that the foundation, however thin, was not gnawed or cut.

Another fact demonstrated was, that in sections of ordinary size the foundation, neither the half-filled combs, stretcht nor sagged. They remained as put in, except that the foundation, having as it did sharp corners, was before the side-walls were put on made to appear less angular and more downy; that is, the shiny appearance vanisht, as did also the yellow color. Nothing could have been more complete than the transformation in color and texture. It was so perfect that no one could have realized that only three hours before the beautiful white, downy, perfectly-formed combs were thin, corrugated sheets of yellow beeswax.

Experiments in brood-frames filled with the same foundation, 5x12 inches, did not sag or stretch, tho as white and transparent as natural combs until about half full of honey, when they began to settle, and the cells to assume a rectangular form. This experiment furnisht one more evidence that it is not the walls of foundation that prevents its settling, but its general thickness.

During a good flow of honey, with cool weather, no sagging in foundation 5x12 inches took place, but in the same flow a few hot days developt the fact that no-wall foundation, the lightest ever made in pieces 5x12 inches, with no support, would not do for brood-frames, tho none did worse than to settle. It was a great pleasure to me to realize that I could now produce comb honey in sections 4x5 inches that I could put on my own table without apology—no yellow, hard strip in the center to prevent its being served to expert visitors.

Clare Co., Mich. T. F. BINGHAM.

[In the Bee-Keepers' Review for January, Editor Hutchinson had this to say about the no-wall foundation, which was accompanied by the illustration appearing on our first page this week, kindly loaned us by Mr. Hutchinson.—EDITOR.]

The No-Wall Foundation.

Some of my readers will remember that at the meeting of the Michigan State Bee-Keepers' Association, held in 1896, Mr. Bingham so strongly advocated what he considered the advantages of a very thin foundation having no side-walls; that sufficient money was contributed to pay for the expense of making a mill upon which such foundation could be manufactured. Some of this foundation, running about 16 feet to the pound, was sent out to the different members; some of them using as much as 10 pounds of it. Unfortunately, however, so far as a report was concerned, Mr. Bingham was about the only one present who had given the foundation much of a test. I produced no comb honey in my own apiary last year, and Mr. Aspinwall was detained at home by company.

It will be remembered that Mr. Aspinwall had previously reported in the Review that he was pleased with it so far as the eating quality of the honey was concerned, but that it curled too much to suit him. His only objection is that of curling. To show how little trouble *he* had from curling, Mr. Bingham brought along to the convention a super full of partly-finisht sections just as they came from the hive. The foundation had been brought out, or partly drawn out, and filled with honey, and, as this was at the end of the season, when, as all experienced bee-keepers know, there will be curled combs if at any time, the exhibition of that super, just as it came from the hive, was a pretty good proof that foundation will not curl in *some* place where it might be expected that it would. Of course, no one doubts that it *did* curl with Mr. Aspinwall, but, of course, there must have been some reason for it—something in his management, locality, or *something*.

Mr. Bingham's supers are small; I think that two are required to cover the top of his hive, and that one super holds 15 sections. Some boys got hold of two of the best-filled sections, and "gouged" them so badly that they were valueless for pictorial purposes, but I rescued the other baker's dozen, and brought them home, and had them photographt, first taking one side from all but two of them. From the photograph I had a half-tone made which is shown herewith. I did this to show how straight are the combs that are built under circumstances where curled combs would be expected. Mr. Bingham says that this was not a selected super, and to show that the sections were not selected, he brought the super just as taken from the hive, with the sections all stuck together with propolis, so that it was necessary to pry them loose with a knife in order to get them out.

I honestly believe that this thin, no-wall foundation is worthy of a most thorough trial. The fault of curling has been urged against it, and some complaints were made that the bees were more inclined to gnaw it down when no honey was coming in than they were other kinds; but, as in many other things, actual experiment under various conditions is needed. The quality of the finisht product is certainly very fine; the nearest approach to that of natural comb of anything I have seen.

In working out the ordinary flat-bottom foundation the bees do change over the base to the lozenge-shaped style. There are no side-walls on in the way, and it is possible for them to make this change. With the deep-cell or Weed style of foundation the bottoms of the cells are so securely braced by the three deep walls that center upon each cell-bottom, that it is impossible for the bees to "budge" the bottoms of the cells. Not only this, but the side-walls are in the bees' way, and prevent their getting at the bottoms of the cells to make changes. Even with the ordinary or lozenge-shaped base, the bees make some changes in working out the foundation. Mr. Bingham had with him a piece of the no-wall foundation which had been partly drawn out in a strip down through the center. Some of the cells were, perhaps, one-fourth of an inch in depth, and shaded off until there could be seen only a few "scratches" that the bees had made on the surface of the wax. About the first thing that bees do, judging from the appearance of this specimen, is to make the bottom of a cell rounding, like the bottom of a prest-tin wash-basin. Then, as the side-walls are started the lozenge-shaped character begins to appear in the base. It is much the same in natural comb-building. Get a piece of natural-built comb having a wedge-shaped edge of cells that are not complete. Look right down close to the edge, where the bases and side-walls are being started. You will see that there is a stage in the proceedings when each base or bottom to a cell is rounding instead of being formed of lozenge-shaped pieces. As the side-walls are laid out and started, the lozenge-shaped base appears.

What is the point to all this? Well, it is probably that we will never be able to make such foundation that the bees will accept it without change, and be satisfied with it any more than we can make a nest that would suit the robin, but let us get just as near to it as we can.

Mr. Bingham has brought out the best style of smoker, and the best style of honey-knife, and it is possible that he has struck upon the best style of foundation for use in the sections.

Genesee Co., Mich. W. Z. HUTCHINSON.

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☞ See "Bee-Keeper's Guide" offer on page 125.

Injurious Honey-Crop Reports—Ripening Honey.

BY C. DAVENPORT.

In my last I promist to show that reports of very large or expected large crops actually do injure the market for our product. A year ago the past season I went to Minneapolis and took samples of white clover comb honey which was strictly fancy in every respect, and altho there are dealers there who handle honey by the carload, I could not sell them even 1,000 pounds, for from the reports in the bee-papers they said there was the largest crop of honey ever known or heard of, and they expected very low prices later. Soon afterwards, I was in Chicago on other business, and found it was the same there—the dealers all thought there was an immense crop, and refused to buy outright, except at a price below the cost of production.

Now, as in both instances, this was early in the season, before they had received any shipments to amount to anything, their only way of forming an estimate of the crop was through the bee-papers, for practical bee-keepers do not send private accounts of large crops to dealers, notwithstanding what they may say to the contrary.

Probably some who read this will think that the price at which honey sells in the cities does not, or cannot, affect them, as they sell in their home market, where they obtain fair, and in some cases, large prices. But in a short time there may be more honey produced in their locality than the home market can produce. Take my own locality, for instance. But a short time ago here clover and basswood comb honey sold for 15 and 18 cents per pound; the last two years it has sold for 7 and 8 cents per pound, by the case, and some bee-keepers have scoured the country retailing it for this, and in some instances even less.

Now, in my opinion, another reason why honey has declined in price in the city markets is the inferiority of most of it, to what it used to be. I think without exception all producers now remove the sections as soon as possible after the honey in them is capt over, and while this results in whiter, nicer-looking honey, it is greatly inferior to what honey was years ago, when it was left on the hives for a month or more after it was finisht, and when consumers paid from 25 to 40 cents a pound for it. While I believe that honey can be removed as soon as capt, and handled so that it will be nearly if not quite as good as that left on the hives for sometime, I do not think there is more than one bee-keeper in five thousand, as they average, who does, or tries to do, any more with comb honey after it is removed from the hive than to keep it so it will *look* all right until it is sold; when, if it is shipt to some city market it is probably stored in a cool room, and by the time the consumers get it they know that if honey is not now manufactured without the aid of bees it is not what it used to be, and many decide that they can buy other things for the same money that they would rather have. I believe a mistake has been made in paying so much attention to the appearance rather than quality.

In order to show that this is not theory, I will say that my own crop is thoroughly and properly cured after it is removed from the hives, and on this account I have customers who take and pay two to three cents more per pound for it than they can buy elsewhere that which looks fully as good. Two years ago my crop was unusually large, and I had to find a new market for a few thousand pounds of it, and these new customers were so pleased with the quality of it that if I had had it the past season I could have sold a good deal more than my previous large crop without any soliciting.

CURING-HOUSE FOR COMB HONEY.

I will briefly describe my curing-house, and the method I pursue in curing the crop. The house itself is a small wooden building double-boarded on the sides, with double floors, and two thicknesses of heavy building-paper between the boarding and under the shingles on the roof. Being constructed in this way it is an easy matter to keep a high temperature inside with but a small amount of artificial heat.

When the filled supers are removed from the hives they are stackt up in this room, with the under ones raised about a foot from the floor, and inch strips placed between them all, so the air can circulate freely between them. The temperature is then kept as nearly 95° as possible for from 4 to 6 weeks, depending upon the condition of the honey, for the thickness or body of the same kinds of honey varies greatly with different seasons. In a dry season honey is usually thicker when sealed than it is in a wet one. The past season white clover honey was very thin and hard to cure in this locality.

Some who removed sections as soon as they were sealed lost part of it on account of its souring in the combs. Until one has eaten it they would not believe the difference there is in favor of honey that is thoroughly cured or ripened, and such honey will seldom sour or candy inside of a year if it is kept in an unfavorable place afterwards. It is also much safer to ship. I ship some honey thousands of miles every season, and so far as known there has never been a dollar's worth broken in transit.

Southern Minnesota.

Again the Evolution of the Honey-Bee.

BY I. W. BECKWITH.

If the editor will permit, I will say a few words on the above subject, in reply to Mr. Doolittle's article on page 530 (1897), and then drop the subject.

In his first article, Mr. Doolittle declares that bees can learn *nothing;* and makes six other assertions neither of which is generally admitted, and when I express a doubt he tells me that the proof devolves on me and not on him. If Mr. D. had ever been present when any point in law, politics, religion, or any other question was being discust pro and con, he would have learned that the affirmative proved the proposition or lost its case. I showed that bees do learn, and he admits it, but claims that they were capable of learning just as much at the beginning; and in so doing he admits that his first statement—that bees can learn nothing—is false.

He tells us that he knows that bees cannot be improved, because God at the beginning pronounced all his work "good," and he is willing to take God at his word. He understands that as God said it was good, therefore it could not be improved, or made better; so we may reasonably infer that when Mr. Doolittle advertises an improved strain of bees he intends to deceive and swindle his patrons.

I do not doubt but he is every day making use of vegetables, fruits and animals which he knows to be improvements on those in the natural or wild state—"just as they came from the hand of the Creator, six thousand years ago."

Yes, I do believe that bees may be educated and improved within certain limits, and that in so educating them they will not necessarily "become a curse instead of a blessing."

Weld Co., Colo.

[In order that a final utterance on this subject from both Mr. Beckwith and Mr. Doolittle might appear in the same number of the Bee Journal, we forwarded the foregoing to Mr. Doolittle, who thus responds:—EDITOR.]

The following paragraph appeared from my pen in the Progressive Bee-Keeper for March, 1897, and I reproduce it here so the readers of the American Bee Journal may see the item which has caused Mr. Beckwith and others to write much uninteresting matter to practical bee-keepers, in order that it may appear that Doolittle "intends to deceive and swindle his patrons:"

"INTELLIGENCE IN BEES."

"Noticing an item in one of the papers, trying to prove that bees were intelligent creatures and reasoned, I am led to say that bees have the same habits now as they did at their creation, as permanent and unvarying as the attraction of gravitation, or any law of Nature. They still act alike under like circumstances. They are incapable of education. They learn nothing. By taking advantage of these habits, we can control their actions and make them subservient to us, just as we take advantage of any law of Nature, and, by proper machinery and manipulation, cause them to produce desired results. If bees possest the intelligence of the higher order of animals, and could learn tricks like dogs and horses, we could not manipulate them as we do now, and they would become a curse instead of a blessing."

I believe what I wrote in the Progressive, when taken in a broad, general sense (as practical bee-keepers take the statement that drones from an Italian mother when fertilized by a black drone are pure) is true. In a technical, narrow way, it may not be strictly true. However, it is evident that the trouble does not lie in any fear that the item appearing in the Progressive will harm anything pertaining to apicultural pursuits, but that, unwittingly on my part, this ran counter to a certain evolution theory, that away back in the dim vista of the past, thousands or millions of years, there was an infinitesimal "mite" which evoluted into a tadpole, then into a monkey, and finally into the intelligent man of to-day; hence "a man of straw" was set up, which they proceeded to knock down, wondering why Doolittle did not enter into the combat.

Gentlemen, I prefer to take the practical side, which allows the Bible account of how man came on the earth to stand, and that bees have *not* "learned" so but what they are subject to man. Further than this explanation would be out of place in a journal devoted to the *best* interests of bee-culture. I am aware of my liability to error, but to abuse me because I do not think as you do, when I accord you the right to think as you please, will only show that you are not infallible, and will do me no harm. G. M. DOOLITTLE.

[Again we must say that those who wish to make a display of their deep (?) knowledge of evolutionary and philosophical subjects will have to go outside of the columns of the American Bee Journal to do it. Life is too short, and there is too much of practical importance in bee-culture, to waste valuable space in a discussion of extraneous and theoretical matters having scarcely any bearing on apiculture.—EDITOR.]

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The Two Bee-Keepers' Unions—Co-operation.

BY W. D. FRENCH.

The United States Bee-Keepers' Union and the National Bee-Keepers' Union are nearly the same in name, and both are inadequate to meet the demands or actual necessities of bee-keepers.

Now, if petty differences are at rest, and tranquillity predominates over personal bickering, we may feel more at liberty to express ourselves in regard to our desires relative to co-operation, amalgamation, or mingling together all bee-keepers. We must be mindful of the fact that both Unions have labored to perform what is indispensable; the old one, by its able management, has performed a wondrous task, and still is moving on the same plane of action, showering volleys of hot shot upon the enemies' breastworks. The new Union, starting on its mission to do good, undoubtedly will succeed, and its duties, as portrayed, no one can gainsay.

Should both be blended or made one its utility undoubtedly would be increast, and yet the most important feature, and that which is most vital to honey-producers, is not incorporated in either Union, viz.:

THE MANIPULATION OF THE HONEY MARKET.

I am opposed to trusts and combinations in a sense where they have originated for the sole purpose of heaping additional burdens upon the general public, by enhancing the price of food or other products, or to place a restraint upon any one physically, morally or mentally, but the consolidation of bee-keepers is not to be clast in the category of such vile institutions.

Profits arising from the sale of honey should not be distributed except to bee-keepers themselves, but to maintain a proposition of this character bee-people must certainly act together, disposing of the honey-product of the United States under one general management.

I have many times insisted upon a proposition of this kind, and urged bee-keepers to unite under one organization, not designing to burden the consumer by any additional expense, but to stimulate the price to the producer.

I would respectfully call the attention of bee-people to the proposition submitted to the Buffalo convention in 1897, from the able pen of Geo. W. Brodbeck, of California, who plainly set forth his views upon this subject, and who very forcibly vented the minds of many. While I am not fully in accord with this proposition *in toto*, it brings to bear the main object which all apiarists should consider.

Every State should have its organizations not unlike the California Bee-Keepers' Exchange, which has now been establisht (beyond a shadow of a doubt), and has become a reality surpassing all anticipations of its founders.

If every State were as thoroughly organized there would be little difficulty to establish a Union that would not only benefit the fraternity, but would place the pursuit in the category of one of the leading industries of the United States.

A Union establisht in the interest of bee-keepers must necessarily embrace the marketing problem, together with the protection of bee-keepers in their lawful rights, the prosecution of adulterators, and any other question which might involve the promotion of the honey-industry of our country.

Agitation of a pure food law, to be past by the general Government and by each State Legislature would certainly bring action, and we would then be fully prepared to meet the enemy, and stamp that nefarious swindle in the mud of oblivion.

Now, bee-keepers, will you consider this proposition? Will you act in harmony, unite forces, blend all elements by burying the tomahawk of opposition, and become united in one grand and noble Union for the benefit and uplifting of a demoralized pursuit in which we are all interested?

I am sure I hear some one speak, in which he tells us that such a proposition could never be materialized, for the reason that a sufficient amount of cash could not be realized to transact business in its infancy. To overcome this feeling, which would seemingly be a stumbling-stone, I will offer (after we get the next honey crop in California) as a starter $20, and if 100 men will do the same thing, by putting in an equal amount, we would have the snug little sum of $2,000 to start with, besides all revenues which might be derived from membership fees.

Now, gentlemen, brace up and tell what you think.

San Diego Co., Calif.

CONVENTION PROCEEDINGS

Report of the Northwestern Bee-Keepers' Convention, Held in Chicago, Nov. 10 and 11, 1897.

REPORTED BY A SPECIAL BEE JOURNAL REPORTER.

(Continued from page 183.)

SECOND DAY—FORENOON SESSION.

After a few minutes rest, during which the members examined the specimen of honey built on the drawn foundation, as exhibited by Mr. Cooley, and the seeds of clovers shown by Mr. Stone, the President said:

THE NEW DRAWN OR DEEP CELL FOUNDATION.

Pres. Miller—How many have used the drawn foundation this season? I count four. We will be glad to hear from those four.

Mr. Baxter—I claim that I have used drawn foundation, but I have not used this foundation spoken of here to-day. I consider that this is a misnomer, altogether. It is not drawn foundation at all. It is what I would call deep-cell foundation, or deep-wall foundation. That is what such foundation was called years ago, when some one in Kentucky invented two machines for making it. It is not drawn. It is no more drawn than the other foundation is. It is done by pressure, and not by being drawn, and I think it is generally understood among bee-keepers, when you speak of drawn foundation, it is the old foundation drawn out by the bees. I have some of that foundation at home now, and partly workt upon by the bees. That is drawn foundation. I would not advocate the using of this, for the reason that it looks too artificial. It is too much as it was when it was first given to the bees. It is very well to give them a start. Give them the base of the cell, that is sufficient.

Mr. Moore—I am chock-full of the effect on the consumer of this sort of thing. I have been six years on this ground, and am simply chock-full of ideas as to what consumers have said to me on this very point. I am thoroughly convinced that this whole matter of foundation, when you use anything more than the merest beginning, is bad, and that is one of the things I use in talking to them. My customers tell me they buy three or four times as much of me, because I say it is pure. My brother produces lots of it, and it is just as the bees build it, and they ask me every day a dozen or twenty of them, "Did you build that, a full, complete comb as I have here?" "Did you build that?" or, "How did they build that?" And my answer is, "They can't build that. It takes 400 bees a whole summer to gather a pound of honey, and there is no man, not even a Chinaman, that can." I tell you now, if I offer this foundation honey-comb to our customers at 10 cents a pound, and say, "Here is some the bees built themselves," for 25 cents a pound, nine out of them take that. They jump to conclusions. They don't look at these things through the eyes of the bee-men. They think if you cell a little deep you can cell a little deeper. That is the way it is publisht by the newspapers who want to do us an injury. I have had grocery men insist upon it, and say, "Why, they make it," and they have even named the A. I. Root Company to me as people who made comb honey complete. You can see what the public thinks of it. When you go to making the cell deeper they jump to the conclusion you can make it full depth, and put something else in besides honey, and they don't want it. There sits in this room a gentleman who represents one of the largest wholesale dry goods houses in Chicago, and he knows that a week of explanation cannot wipe it out. This ray of distrust is the idea that honey can be got without the aid of the bee at all, or it may be that you do half the work; and I have stood for an hour and explained to four or five men, who askt me, "Did you make this?" or, "Where did they make it?" or, "What did they make it out of?" or, "How did they cap them over?" and, "What do they put in it?" I tell you it is a damage to you as bee-keepers to use anything more than the merest bottom, aside from the question of economy to you as bee-keepers in your hives. It is the distrust the people have of anything the bee doesn't make. They know that man is awfully smart. They have confidence that the bee is as disingenuous as she was thousands of years ago: and if you leave the bee alone it will treat you nicely. I would like to have Mr. Everett speak to you.

Mr. Everett—This is my first experience in a bee-convention. I haven't nearly as many bees as a lot of you people here, probably. I went into bee-keeping as an amusement, really. I had them when I was a boy, and when I located in Oak Park I sent over to Michigan and got a couple of colonies of bees. I had 80 this summer. And I used the foundation such as the gentleman has exhibited to you here. I found it to work perfectly satisfactorily. And I believe, as he says, that anything beyond this foundation would be a detriment, altho I must say this, that I have never had any experience with what you term the drawn foundation. I have used the latest that I could get, in all the honey that I have produced, and I do not find any trouble whatever in disposing of it. As Mr. Moore says, the people are suspicious. I had a groceryman tell me the other day that a person brought back a section of honey that I had sold to him, with six or eight cases, and said it was not genuine honey. But the person didn't know what he was talking about. It was from this thin foundation. I am not able to give you any light on this question, because all I know is what I have pickt up in my own bee-yard.

Mr. Stone—I have had men by the score that were handling comb honey tell me that they were selling that for manufactured honey, and when I would look at it I would tell them just the facts in the case, and what I believed about it. And there were samples sent from a neighboring city where a lady I had known all my life lived, and she said she sent them to Springfield to have me see them; she said if Mr. Stone said that was manufactured honey she would believe. Her husband had bought it of a groceryman for manufactured honey. There were two good samples of white clover honey and Spanish-needle honey; and I showed them the card of Mr. Root, which he publishes, offering a reward of a thousand dollars. They said they would go back to their groceryman and enlighten him. I hope that nobody will ever send any out to Springfield, and that they will never enlighten the people there in regard to the raised cell. I don't want it around. It gets just to the point where Mr. Moore speaks of, it gets it so that people say if they can do that much they can do more, they can fill it, and they can cap it. I hope it will never go any farther.

Pres. Miller—I want to just say this, as Mr. Whitcomb said awhile ago, he always felt like doing something for the under dog in the fight. Now, there is nobody on the other side at all.

Mr. Wheeler—Here is one.

Pres. Miller—I want to say that I do believe we ought to be entirely fair, at least. When foundation was introduced there was objection made to it in the first place, but that has died away, and everybody has said it is all right to use foundation, and not many object to filling the section all full of foundation, and using it altogether, and yet if you go just a little beyond that then there is something terrible about it, and if all of this talk gets to the public no heavier blow has been made to the sale of comb honey than has been made just by the objections of bee-keepers themselves. It is not the public that is objecting to this; it is the bee-keepers. It is said, "Up to a certain point it is all right." Now, if that is true, if the public will commence objecting at a certain point, won't they object just a little before that, to that same material being put in? If it is to bad material they object, won't they object before that? Now, why is it, if it is a right thing to put in that sheet of foundation, that it is so much worse when you increase the amount of material that you put in by 50 per cent., or 100 per cent.? It is the same material exactly. If it is good in one case, why isn't it in the other? Some have called attention to the yellow part that is there, and state that with ordinary foundation that would be white. My bees don't make it white, and some of you know your bees don't make white septum out of yellow foundation, and I believe if any of you watch closely you will see it is left yellow. But your attention is very closely called to this sample. You will see flaws you haven't seen before. You are looking for something wrong about it. Now, as the final outcome of this, I believe if bee-keepers keep quiet, and don't bring up objections that don't exist, that no harm will ever come from it. I want to say candidly to you, that I doubt very much if many of you will ever use a pound of it. I don't believe, in the first place, you can afford to. In the second place, it will not always be found to be an advantage for you as bee-keepers. I will say to you that in my own case I did not see any advantage in using it, and as it is more expensive, I am not likely to use it. Now, don't let us raise suspicions in the mind of the public ourselves, where there is no cause for it. If you quietly try this, and find it is not profitable, you are not going to use it, and there is no use in your saying that this is such a bad thing, when you are all the time using a part of the same thing, and the most important part, too. You say, "If it can be made as thin." They have made the walls of it as thin as the natural product. That is all I am going to say; and you can go on now and fight it.

Mr. Baxter—I beg to differ with you radically. I know that bee-keepers are not finding fault with it, but the public is. With my own experience all over the country—and I go around a great deal—when I take up a piece of this foundation, I tell them I am using only this much. You see that doesn't look like the natural comb at all; there isn't a particle of resemblance. "Well, I don't like it. It tastes bad when I bite into it. I want the natural comb honey; but if you haven't got that I will take this." But when I show them the other they say, "If you can come that near to the comb you can make a natural comb." That is the difference between this and the natural comb, while there isn't so much between the other. When you go to using things like that you can take one and say, that is all right, I use that. But they shake their heads and don't believe you. I do object most emphatically to the other, not because I think that it is not a good thing, but because I believe that it will arouse the suspicions of the public a great deal more than this ever did, or anything else that the bee-keepers could use.

Pres. Miller—Let's have a report from the others who have tried it.

Mr. Wheeler—I believe I tried 18 sections of the drawn foundation, filling with full sheets, and I had a little different experience than these gentlemen about the bees working on it. I think there will be a little misapprehension in regard to that. My bees went to work, and they seemed to begin at the bottom, and sort of fixt the comb over. They didn't put honey right into it. The honey-flow was all right, but they left it for a few hours or for a day or two empty. I would take that out, and the edges would be kind of whitened over, and no honey there. It wasn't like the comb, if I had put a section with partly drawn comb in it. They would have begun to put honey in it as soon as it was put in. That led me to think that they fixt it over, and within six hours from the time I put in one lot of sections the bees were whitening it and working on it. And the foundation put in at the same time they hadn't toucht. After those sections were filled we all ate of it, and I let my neighbors taste of it by the side of the honey built on the old-fashioned foundation, and I could not detect one particle of difference, nor could any one else. I used Mr. Root's extra-thin foundation, the Weed process, and I would like to show you the two foundations side by side to-day. I have 18 of those sections nicely filled, and from the outside appearance you cannot detect a particle of difference. I believe it would be impossible for you to. I think 15 or 20 people tried it. This year I could not see that it was very much advantage. It seemed as if this year the bees would commence promptly on the old foundation that I had on the hives for four or five years, while in other years, in a poor honey-flow, they would not have toucht it. So it was hard to tell whether this was an advantage or not this year, because they began and workt on that right along, filled the super up with bees, and I couldn't see that they workt on the old-fashioned process any less quickly, but these sections started were finisht sooner.

(Continued next week.)

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Beeswax Wanted.—Until further notice we will pay 26 cents *cash* for all the good yellow beeswax delivered to us. We accept only that which is absoutely pure. If you want cash, and want it *at once*, send us your beeswax now. Be sure to put your own name and address on each package, when shipping. Then mark it very plainly—George W. York & Co., 118 Michigan St., Chicago, Ill.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Fastening Foundation in Brood-Frames—Changing Location of Hives.

1. I am just a beginner at bee-keeping, and would like to know what is the best way to fasten foundation in brood-frames?

2. Would it be all right if I moved my bees about 100 feet away from the place where the hives stood last summer? I am keeping them in a cellar this winter. IOWA.

ANSWERS.—I have never found anything that suited me so well as to have a saw-kerf in the underside of the top-bar, said kerf being ¼ inch deep and 5-32 inch wide. Slip the edge of the foundation into the kerf, then a drop of melted beeswax here and there will hold it till the bees fasten it. An easy way to drop the melted wax, is to make a wax-candle by roughly squeezing pieces of wax or scraps of foundation about a string hardly as coarse as common wrapping-twine, then when the "candle" is lighted, you can hold it to one side and let the drip fall where you want it.

2. When you put them out of the cellar you can put them in an entirely new place without any risk whatever.

A Supposed Curious Experience.

A curious thing happened to one of my colonies this winter. Some time in November I examined this particular colony as I was suspicious something was the matter, because there was so little life about the hive compared with the rest, and I found a very small handful of bees in a 9-frame chaff-hive *full* of honey. The first of December the weather grew cold and there was quite a snow-storm, so my husband helpt me move that hive with others to a more sheltered locality, he lifting one side and I the other (and it was all I could possibly lift). Stepping backward my foot slipt, and down I went, hive and all! My first thought was that the colony was ruined.

With my husband's help I was extricated from the unpleasant situation, and the hive placed on the stand. I found, on examination, that no combs had fallen down, but the weather was cold and I feared the scattered bees would die, so I heated a large soap-stone, wrapt it in several thicknesses of flannel, and put it among the chaff cushions just over the brood-frames.

From that time until Feb. 11 there seemed but little stir. That was a warm day and the bees all had a fine flight, but I wish you could have seen that hive! There were thousands and thousands of the bees, and the alighting-board, front and top of the hive, was first covered with bees and the air full of them. They lookt like young bees out for the first time. Do you suppose that putting that soap-stone among the cushions caused brood-rearing in mid-winter? It certainly looks as if it might be so.

My 14 colonies seem in good condition at present. N. Y.

ANSWER.—I'm sorry to offer any words of discouragement, but I'm very much afraid if you look into that hive again you'll find the colony not so very strong. Indeed, you will probably risk nothing by looking into the hive any day, for it is very doubtful if there is a living bee in it. Those bees that were having such a lively time about it on that warm day, were most likely robbers from the other hives.

Clipping Queens' Wings—Candied Colorado Comb Honey.

1. Is it well to cut the wings off of what queens you can in an apiary where at least a third of the hives have their brood-frames so crost with the honey and brood that you cannot raise them? I have bought a good many of my 250 colonies is the reason why they are in such a condition. I lost a good many queens last year from the old hive. I wondered if turning them so many times, and then carrying them to a way-off stand might not confuse them so that they would take the young queen to the wrong hive?

2. Don't you think it mean for Eastern honey-men to say Colorado honey is not as good as their home honey? We have all kinds of honey just as they do back East—white clover as well as alfalfa, etc. Pure alfalfa honey does not candy. Last season, very early, the mesas here were covered with a blue flower that I think was argeratum, but it made such fragrant honey that the people here called it wild heliotrope. And by the middle of June we were taking off this lovely white honey, but alas, it candied in a very short time. I melted mine up and sold it in tin cans. But I might just as well have saved the trouble, for the Chicago commission men I, with a few others, sent a carload of honey to, got me only five cents per pound for the whole lot of mine, and four cents for one man's 550 cases of beautiful comb honey. He said it arrived in only fair condition, most of the cases leaking, but when honey is not broken down, don't you think the cases can be cleaned and all be made right? The most of the carload of honey was white as *snow*. I said when I packt it that it lookt like angel-cake—the most delicate honey I ever had. COLORADO.

ANSWERS.—1. Decidedly, if I could get at only part of the queens I would clip them.

2. It seems to be the common thing for bee-keepers to think that the product of their locality excels. If you will note the mention made at different times in bee-papers, you will find that every little while some one speaks of the honey from his region being the finest in the world. I am quite inclined to the opinion that good honey can be found in very many parts of the world, and that people are likely to like better the honey with which they are best acquainted. There are inherent differences in honey, however, and there are differences in taste. The alfalfa honey I have eaten from Colorado I should rate very high indeed.

You don't say whether the honey you sent to Chicago was comb or extracted, but from your speaking of its not being broken down, I suppose it was comb. If cases of honey are leaking, that must affect the value a little, and the worse the leaking the more the price is affected, but it does seem that it ought to have brought more than five cents a pound, if combs were not broken down. Not knowing exactly the condition of the honey, of course no one could say exactly what it should have brought, but I would want to know pretty surely a commission man was all right before shipping, as he has matters all in his own hands.

[We are quite sure that this same honey was sold as the questioner states, at a low price, and was retailed at one of the city meat markets here at two sections for 15 cents. We bought 10 cases of this same lot of honey from the commission man who had it in stock, and when we came to open it we found it candied solid. This was in December. We returned eight of the 10 cases, selling the other two at cost, 10 cents per pound.—EDITOR.]

Preventing Swarming—Drone-Comb.

1. Would this be a good way to prevent swarming? At swarming-time take all the combs with brood, honey and adhering bees, except the one with the queen on should be hung in the upper story, and the brood-chamber filled up with frames, starters and a queen-excluder on top.

2. Or, at swarming-time, take a swarming-box and shake all the bees and queen from the brood-chamber into the swarming-box and carry them into the cellar till the next day, then hive them as a natural swarm, and let the old colony rear a young queen.

3. I have a good deal of drone-comb in my brood-frames. Can I, in the spring, remove the drone-comb and place the rest of the frames on one side of the hive and a division-board next to them, then when honey is coming in, put empty frames in the middle? MINN.

ANSWERS.—1. If I understand you correctly, you mean to have one frame of brood with the queen and adhering bees in the lower story, filling up the story with frames and starters, and putting the balance of the combs in a second story, a queen-excluder being between the two stories. This is the plan recommended by G. W. Demaree, and has been successful with him, only you will be likely to have a good deal of drone-comb if you use only starters. Full sheets of foundation will be safer.

2. If you mean literally to take *all* the bees, the likelihood would be that you would lose a lot of brood by cold and starvation. If you leave enough bees in the hive to take care of the brood the plan may be all right.

3. That's a good plan if you're anxious for more drone-comb. For those empty frames will probably have more drone-comb built in them than the ones you remove. You can make a sure thing of it, however, by giving full sheets of foundation. Of course, when you take away the combs with drone-comb you must look out that the queen shall not be crampt for room.

Dark Combs—Worms in Hives.

What makes honey-comb black, or nearly so? We took about 20 pounds of honey from the long frames in the lower part of three or four hives, last fall, it being our first year with bees in this part of the country, and the comb was dark—some of it almost black—thick and heavy. The honey was also darker and richer and of stronger flavor than I had ever known honey to be. They had plenty of white and red clover within a mile, and in some respects did well; the exception was that we had to burn one hive, as it contained nothing but a mass of comb and white worms, large, thick and soft. I shall be glad to be informed of the cause of those worms and their prevention and cure. MASS.

ANSWER.—Before I forget it, let me advise you to get a good text-book on bee-culture, and if you do I feel sure you'll thank me for the advice. That will inform you fully about wax-worms and a great many other things. If next summer you should kill a hen and leave her lying somewhere where dogs and cats would not get her, you would probably find her some days later filled with worms or maggots. It would not be right to conclude that the worms had killed her. Neither did the worms ruin your colony. Bee-moths haunt all apiaries, trying to get in the hives to lay their eggs, and succeed to some extent in doing so, but the bees are alert to clean out the young worms that hatch out of the moths' eggs, especially if the colony is strong, and still more especially if the bees are Italian. But if a colony becomes weak and queenless then the moths take possession, and in course of time the combs will be filled with wax-worms.

I don't know what makes comb black. I might say age, but that's only dodging the question. Whenever comb is used for rearing brood it commences to grow dark, and every generation of brood reared makes it darker until it is nearly black. It has been said that the dirty feet of the bees are responsible. It has been said that it is caused by the first discharge of the feces of the young bees. It's all right for brood-combs, and bees prefer the blackest combs, either for brood or honey. But people don't. The whiter the comb is the better it is liked for the table, and indeed it is not merely a matter of looks, for old, black comb does'nt taste so well. The darkness of the honey, however, was not caused by the comb, but by the flowers from which it was gathered. If the combs had been snow-white, the honey would still have been dark. Fall honey is generally dark.

Perhaps from Skunk-Cabbage.

How can you account for two days after four degrees below zero, the bees carrying in yellow pollen; not many, but even a few? The whole bee is covered with yellow dust, like in the spring or summer. Where can they get it? NEW JERSEY.

ANSWER.—I should guess from skunk-cabbage, but will yield the floor to any one who can tell without guessing.

Getting a Tree-Colony—Bees in a Room.

1. I have a bee-tree standing on another man's land that I found last fall, and the man who owns the land would not allow me to cut it, but told me if I could take the bees out in the spring I could do so. Can they be taken out? If so, how and when would be the best time to do so?

2. Also, I have a colony of bees in the "gum" that I cut and brought home last December, and not having any room anywhere else, I put them in an unoccupied room where it was dark, but I can't give them ventilation enough as the weather warms up outside. Will it do any hurt to set them up out-doors? And would they need anything covered over them? WISCONSIN.

ANSWERS.—1. Each case of this kind is a problem by itself; the position of the colony in the tree and other differing circumstances making one case quite different from another. If there is a hole below the colony and another above, or if you can make holes, you might succeed in smoking out the bees, and perhaps as good a time to try it would be in fruit-bloom. But you'd have only the bare bees, and if you can get a fair price for sawing cord-wood perhaps you'd do as well to buy a colony.

2. Probably you'd better set them out. It can do no harm to cover them, but of course you must leave the entrance free.

Transferring Bees—Getting Bee-Supplies—Bees and Fruit—Gluing Sections.

1. When would be the best time to transfer to get as much comb honey as possible?

2. About what time ought I to get my bee supplies?

3. I have a fruit-grower about 200 yards from my bees. Is it any better for the bees, or not?

4. Is it better to glue the one-piece sections and the joints? VIRGINIA.

ANSWERS—1. Probably you'll do as well to wait till the colony swarms, hive the swarm in the new hive, placing it on the old stand and putting the old hive close beside it. Then in about a week take the old hive away and set it in a new place perhaps a rod away. That will throw all the flying force into the swarm, and it will do good work in supers if the season allows. If the box-hive has top boxes, take them off and shut up the holes so the bees can't get up, for it may hinder them about swarming if they have extra room.

2. It depends somewhat on circumstances when is the best time to get bee-supplies. If you want only a small amount, you can wait till about the time you need to use them. Even then, however, it is much better to order ahead. If you wait till about the time you need the goods, it sometimes happens that dealers and manufacturers are behind with orders, and you have to wait. Sometimes there is delay in freight trains or goods are miscarried, making a delay of two weeks or more. You can generally tell in December what you will want for the next season, and may as well order then. But if you haven't ordered before March, better order right away.

3. A fruit-plantation near by is an advantage to your bees, and perhaps the bees are a still greater advantage to the fruit-grower.

4. The one-piece sections don't need gluing at all. Generally it isn't necessary to wet the joints, but if they have become at all dry it is better. You can easily tell; if the joints don't break, don't wet them; if they break, wet them.

Wintering Bees in a House in North Dakota.

I came to North Dakota in 1878, but the severity of the climate kept me from trying bee-keeping. Last spring I got one colony and increast to four, putting them in winter quarters in fair condition Nov. 1.

Some of your answers to questions begin to give me some concern. You are doubtful of bees confined from Nov. 1 to April 1. I built a frame house 8x10x8 feet, double-boarded and tar-papered outside, and lined and papered inside; shingle-roof, double-doored; the house is close, still it will stoop down to zero or lower. I set hives side by side, packt them all around with wheat chaff, gave a little top ventilation, set the hive on a tray two inches deep, with a spout 3x3 inches, leading out one foot through the chaff.

1. Will the bees not stand it five months?

2. Would I better take them out, if living, in March, and run the chances of being chilled in the hive?

3. Would it do to take them out for a flight in March, and take them back in again?

4. Will there be any danger of some frames of honey I kept over, candying, so I cannot give them in the spring to the bees? Parts are not sealed. I keep them in the bee-house, at zero heat. N. DAK.

ANSWERS.—1. If I understand you correctly, a spout leads directly to the outer air from the entrance of each hive, so that there is nothing to hinder the bees flying if a day comes warm enough. That makes a big difference, for I think the cases we were talking about where it was considered doubtful about five month's confinement, was where there was no outlet so the bees could fly. The chief question is, if a day comes warm enough for the bees to fly, will they feel the heat enough through their thick packing to start them to flying? If they get a flight, they'll probably stand it all right.

2. If there comes a warm day, and they don't seem inclined to wake up at all, it will certainly be better to take them out for a flight than to let them stay where they are and not fly at all. If you can get at the hives inside to pound on them so as to stir up the bees on a warm day, it might be a good thing to do so. I'm not sure but it might do some good to blow air into the entrance with a strong bellows. That might be done after the outside air gets warmed up.

3. If you can't get them to fly without taking them out, perhaps you may as well leave them out, seeing it ought soon to be warm weather.

4. Very likely the honey will be more or less granulated or candied, for unsealed honey would hardly go through the winter without candying, unless kept in a warm place. When you give the combs to the bees, if you have some receptacle beneath so the granules can be caught that they throw out, you can melt these up and then feed.

Remedy for Moth-Worms.

During the year 1897 I had 13 colonies, and out of that number the moths have left me 5. My bees were wild, and seem to be a cross with the Italians and blacks. All who have bees in this country lost a great many from the ravages of the moth during the last summer and fall. For a while the honey-flow was very strong. Besides the wild flowers we have the mesquite which yields very fine honey. Can you give us a remedy for the moth-worms? It would be of inestimable value to this country. TEXAS.

ANSWER.—Let me first tell you how to encourage the production of moths. Allow plenty of pieces of comb to lie around for breeding places, where the moth can lay her eggs. If a colony dies in winter, be sure to let the empty hive with its combs stand out where the moths can get at it. They will be delighted with this arrangement. Be sure to increase rapidly, so as to have a lot of little colonies so weak they can't fight their way against the moths and worms. If they can also be queenless, that will help greatly, and it will be still better if they have no Italian blood.

If you don't care to have your combs eaten up with worms, then you can just do the opposite. Keep strong colonies. Don't allow queenless colonies. Break 'em up, or unite with something else if they're not strong enough to re-queen. Get as much Italian blood into your bees as you can. If you have some empty combs in which the worms have started, give them a treat of brimstone smoke. But you'll never be greatly troubled with moths if you'll follow just one rule—KEEP ALL COLONIES STRONG.

Rearing Queens—Italianizing.

What is the best way to rear queens? I have Italian bees at home and black bees at one of my son's, and wish to rear queens to Italianize them. In 1896 I paid $1.50 a colony to have them Italianized, and they failed to change. He claims the bees superseded the queen he put in, and reared a queen of their own. Is such a thing possible, when there are no bees nearer than two miles, and the nearest being bees that he had Italianized? ILLINOIS.

ANSWER.—If you want to do very much at rearing queens, it may pay you to get Doolittle's excellent book on queen-rearing; at any rate, a good text-book, if you haven't one. If you look through the answers in this department for the past three or four weeks, you will find an answer to your question which hardly need be repeated here, those answers having been publisht since your question was written. [We mail Doolittle's book for $1.00, or club it with the Bee Journal for one year, both together for $1.75. —EDITOR.]

It certainly was a very unusual thing for all the queens to be superseded, if there was any considerable number, and doesn't speak the most for the character of the queens. Even if the queens were superseded, if all were Italianized, the resulting stock ought to be pretty good Italians.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Impatient Subscribers.—Several evidently nervous readers who have askt questions to be answered by Dr. Miller, in the "Question and Answer" department, threatened to stop their subscriptions because we didn't get in their questions with the answers as soon as they thought we ought. Now, any one who writes to us that way is very thoughtless. Here we have been giving two full pages of that department every week for several weeks, and even set it in a smaller size type so as to get more in, and still we have on hand a stack of questions with Dr. Miller's answers. It seems impossible to get caught up, but we are doing all we possibly can to do full justice to all.

Here is one way that many can help out themselves and us: Get a good bee-book, read it carefully, and thus find the answers to a thousand and one questions without asking us to print over and over again replies to the same simple questions every week or so. Of course, there will be left plenty of questions to ask after reading the best book. Prof. Cook's "Bee-Keeper's Guide" is a good book; has 460 pages, and we mail it for $1.25; or club it with the Bee Journal one year—both together for $1.75. Get a copy of it and read it.

◆

Honey and Beeswax of Kansas.—Secretary Coburn, of the State Board of Agriculture estimates the 1897 product of honey and beeswax in Kansas at 540,000 pounds, valued at $81,000. We believe that is a low estimate. As Kansas knows better than to waste any of her hard-earned money in saloons, she has more to spend for honey and other good things. Her inhabitants ought to be a clean, sweet people. Those that we have seen from there speak well for Kansas.

New Subscribers—Room for More.—Yes, we have room for quite a good many more new subscribers, and this is a good time of the year to invite them to begin to read the American Bee Journal. It is not that we are anxious to increase the number of honey-producers, but we do feel that every one, even if he has only one colony, ought to take and read the Bee Journal. We trust our present subscribers will aid in placing it in every bee-keeper's home. Many have already done splendid work in the line of securing new subscribers, and we appreciate it greatly.

We are constantly offering desirable premiums for the work of getting new subscribers, but as there may be some who prefer to have a cash commission, we will say that any present reader who sends a new subscriber for the balance of this year (worth 75 cents), may forward to us 50 cents with the new name and address, and keep the other 25 cents as pay for their effort. There is many a boy or girl that can easily earn some spending money in this way. Let there be some good work put in on this during the next month. You will thereby be helping yourself, the new subscriber, and us.

◆

Talking in His Sleep.—Somnambulist, of the Progressive Bee-Keeper, altho he may be a sleep-walker, has always talkt as if wide awake. This time he has surely been talking in his sleep, and when he wakes up he'll take it all back.

The American Bee-Keeper complains because in the Ladies' World Lena Thatcher had given an excellent article on "Honey as an Article of Food," said article having been taken almost verbatim from the writings of Thomas G. Newman, but without any credit therefor. Sommy asks who of the 400,000 readers of the World would ever have seen Mr. Newman's writings, and thinks it a case where "the end justifies the means." Oh, Sommy! your conscience hasn't gone to sleep, has it? You would hardly be justified in stealing a few millions from Rockefeller just because you made a good use of it by distributing it among the poor! Besides, just as many would have read it if Lena had had the common honesty to say she had taken it from Thomas G.

◆

Bee-Keepers in the United States.—The Progressive Bee-Keeper estimates that there are 12,000 people who keep bees in the State of Missouri alone; and that if 40 other States have as many, there would be about 500,000 in this country. That may, and may not, be a high estimate. But if it is even nearly correct, it seems strange that it is almost impossible to get only some 20,000—about 1 in 25—to subscribe for a bee-paper. It must be that the great majority do not realize the value and help a good bee-paper would be to them. With possibly one or two exceptions, there isn't a bee-paper publisht to-day but what deserves at least five times the circulation it now has. Here is a big field to cultivate—a field filled with hundreds of thousands, and yet only a few thousands who as yet comprehend the real value of a bee-paper to them in their work with bees.

◆

Honey for a Cough and for Erysipelas.—Mrs. Julia D. Chandler, of Chicago, hands us the following recipes, which no doubt will be found useful:

HONEY COUGH SYRUP.—The druggist cut spruce-gum with alcohol, stirring after—it is not very easy; and then added extracted honey. I do not know the proportions, however, as the bottle was sent to me as a simple remedy, to use for a child with a delicate throat.

HONEY FOR ERYSIPELAS.—Dr. Hayward (in the Medical Record) calls attention to honey as a remedy for erysipelas. It is used locally by spreading on a suitable cloth, and applying to the parts. The application is renewed every three or four hours. In all cases in which the remedy has been employed entire relief from the pain followed immediately, and convalescence was brought about in three or four days.

Manufacturing Bee-Supplies.—As illustrating the difficulty of getting supplies made at home, G. C. Greiner tells in Gleanings about going to a planing-mill where they readily agreed to plane lumber exactly to any required thickness. But the first board was too thick or too thin, sometimes 1/16 out of the way. Then change of planer, followed by one edge of the board thicker than the other, or the middle thicker than the edges. The same thing occurred at other mills. What they had always considered exact work wouldn't be considered so in bee-supplies. He found the only satisfactory way was to get supplies from those who made it a special business, and were provided for the exacting requirements of matters pertaining to bee-hives. Home-made work hardly pays.

◆

Asking Questions is all right. We want our readers to feel free to ask for information, but we will have to draw the line for awhile on asking and answering over and over the *same* questions, week after week. We think the trouble is that beginners are not careful enough to read *every* question and *every* answer found in Dr. Miller's department of the Bee Journal each week. Hence it is that they keep on asking about "transferring," "what to do with unfinisht sections," etc.—questions that Dr. Miller has answered "forty-'leven" times (more or less) the past three months. We think, in order to save space, and also to get caught up, we will have to ask Dr. Miller to simply give the previous page numbers where can be found replies to repeated questions.

◆

Alfalfa for Hay.—Mr. E. S. Lovesy, who lives in the great alfalfa region of Utah, refers thus to Prof. Cook's statement about alfalfa, as found on page 97:

I agree with Prof. Cook when he says that our lucern secretes honey liberally in dry weather; but when he says that it is better for hay to cut it just before it blooms, I can say that my experience is the opposite. I believe there is in it much more virtue, nutriment or strength when cut after it has been in bloom a week; some here claim to have tested this. As I have always agreed with Prof. Cook in all else, I would like to ask him if he has tested this matter, or does he give it as common custom or belief? Sometimes this proves a common error. E. S. Lovesy.

◆

He Never Smokes.—A supply-dealer was in his store with a bee-keeping customer, and when passing a shelf on which were piled bee-smokers, the following short conversation took place:

Supply-Dealer—Wouldn't you like a smoker?
Customer—No, thank you. I never smoke.

This smoker anecdote we donate to Mr. Bingham, of bee-smoker notoriety. We know when and where it really occurred. We only wish that every bee-keeper could honestly make as good reply, and still use a (bee)-"smoker."

◆

Bee-Literature (?).—E. E. Hasty will be sad. Not long ago he mentioned the departure of a certain order of literature from bee-journals, fondly hoping it might never return. Now has Rambler in Gleanings rambled clear out of sight and sound of bee-keeping, and discourses upon the difficulties of pleasing an ailing wife in the proper selection of a chicken to be killed for Thanksgiving. Fortunately it doesn't come in the busiest time of the year.

◆

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for $1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at $1.00), and 10 cents extra.

THE WEEKLY BUDGET

Mr. B. Frank Hoover, of Whiteside Co., Ill., wrote us recently:

"I'm glad you have adopted reform spelling. Continue, and if anything become even more radical, and adopt even a greater reform. Our reforms come thru our papers."

Mr. W. W. Whipple, of Arapahoe Co., Colo., wrote Feb. 14:

"I think after reading five numbers of the American Bee Journal for 1898, that it is worth its weight in Gold, with a big G."

Mr. Claude Stert, of Uvalde Co., Tex., writing us March 7, said:

"We are shortly expecting a fine crop of honey from a shrub abounding on these low hills, called 'gwahilla;' but some times that dread enemy, 'a late frost,' puts an end to our expectations."

Mr. F. G. Herman, of Bergen Co., N. J., wrote us March 7, when sending $1.00 for the Langstroth Monument Fund;

"Bees commenced carrying pollen to-day, just two weeks earlier than any previous year. We are having an early spring. I trust we shall be smothered in honey this year."

Mr. O. O. Poppleton, of Dade Co., Fla., wrote us as follows, March 8:

"The honey-flow so far this winter is not so good as usual, but yet enough so that nearly every warm day I do a little fooling with the extractor. I have out about 1,000 pounds only. Prospects are good for a strong flow from saw palmetto in April and May."

The Canadian Bee Journal publishers had a fire to break out in their establishment, March 3, which ran through the entire main building of their works, and practically totally destroyed their bee-goods, and otherwise did great damage. The fire caused a slight delay in getting out the March number of the Canadian Bee Journal, but everything is running again on extra time.

The Carleton Family, of Anoka Co., Minn., are well represented in the Langstroth Monument Fund. Here they are: Mrs. J. A. Carleton, 50 cents; Will Carleton, $1.00; Rose E. Carleton, 50 cents; and D. L. Carleton, 50 cents. Also the first two of this quartet of Carletons have become members of the New Union. That's the way to support good causes. There is room for plenty more people like the Carletons, both in the Langstroth Monument Fund and in the New Union. And we are ready at all times to receive their money, and turn it all over to the proper authorities.

Mr. E. S. Lovesy, of Utah, writes thus in reference to the Langstroth Monument Fund:

"I read with some encouragement what Mr. Cameron has to say on this subject, on page 104. I agree to Mr. C.'s suggestion, to be one of 100 to give $5.00 each. I have agitated this matter considerable, because I believe it to be a laudable object. As bee-keepers, let us not procrastinate in this any longer, but let us have 'a long pull, a strong pull, and a pull all together.' This will be a credit to ourselves and an honor to our dear departed Langstroth."

The Leahy Mfg. Co., like others, are on the jump to fill their orders for supplies. Here is what they wrote us March 11:

"This is a great year for trade. We have been running our factory 22 hours a day for over a month now. If bee-keepers would take bee-journals like they buy bee-supplies, there would be fun in running a journal."

Yes, that's so. There would be fun as well as money in running a bee-paper if all who ought to subscribe would do so. Wonder what can be done to induce them to see their duty and need. Here's a problem to solve for any one who wants to earn some good money.

BEEDOM BOILED DOWN.

Marks-Hoffman Metal-Spaced Frames—A plate of metal let into a saw-kerf in the end-bar as a space—having been commended in Gleanings, F. Boomhower, after having tried them, says they are death-traps, not to be compared with staples as spacers.

Golden Italians are generally supposed to be of comparatively recent origin, yet in a letter written by Baron Berlepsch in 1854, and lately publisht in Gerstung's Bienenzucht, he says: "I have a queen which looks exactly as if chiseled out of ducat gold. Her progeny excel all others."

The See-Saw Section-Cleaner has been in editor Root's head for some time, and now he has got it so far out of the whirl and bustle of that busy location as to get it on paper. Works a little like an old-fashioned turning-lathe, having a foot-treadle, and a coil-spring above, so it can be whirled back and forth.

"Covers are Apt to Shrink," says the Australian Bee-Bulletin "thus becoming narrower than the top of the hive, their efficacy in resisting heat and damp is to that extent impaired. Covers should be made at least an inch wider than the top of the hive." But why not shrink that inch before the covers are made?

Management of Swarms.—Here's the plan of Thos. W. Odle, as related in Gleanings, by which he says he gets good crops of honey: When a colony swarms he kills the queen, reserving extra-good ones in nuclei, then at the proper time removes all queen-cells but one, and in about 20 days has a young laying queen that he thinks worth two old ones.

Tall Sections of Light Weight Sold Best.—Thos. V. B. Neece sold sections running 15 to 16 ounces each at 16 cents a pound, 15 to 16 cents a section. A competitor sold at the same price, per pound, plain and tall sections 1¼ or 1⅜-inch thick, but this made them 10 and 12 cents each. The tall, thin sections went off rapidly and the others dragged. Now Neece wants to adopt tall, thin sections weighing 10 to 12 ounces.

The Crane Fence.—Besides the Root and the Aspinwall fence, there is now the Crane. Gleanings describes it as consisting of four pieces with no cleats only at the two ends. This makes a rather weak fence, but has the advantage of freer communication. Where the three inside cleats usually are, wooden pegs about 1⅛-inch thick, ¼-inch wide and 5-12 long are driven through the four slats, so as to abut against the uprights of the sections.

The New No-Bee-Way Section in England.—Somewhat strangely, when a new thing comes up in either England or America, interest in it does not usually cross the water. Plain sections and cleated separators seem to be an exception. The British Bee Journal says that already two forms of separator are patented, and a third just ready. It thinks, however, that the bee-way section is not in immediate danger of being forever swept out of sight.

To Separate Swarms Clustered Together.—Have ready a very large tub. Take it where the united swarms are, and sprinkle it lightly inside. Arrange several branches of trees in the tub so they shall not touch each other. Dump in the swarms in a single cluster, cover the tub with boards, leaving free entrance for bees still in the air. Each queen will take a separate branch, and in half an hour the separate swarms can be hived. It is well to sprinkle the branches with sweetened water.—*Apiculteur.*

Identifying Laying-Workers.—D. W. Heise, who from starting out in Canadian Bee Journal as a "picker up of unconsidered trifles," has developt into a full-fledged boiler himself, is desirous of a chance to crack the knuckles of this boiler. Well, if it is a matter of necessity that the knuckles must be crackt, there is probably no one who will administer the cracking in a more judicious manner, or with fuller consideration for the benefit of the crackee than the same man Heise. So here's the chance, D. W.: Quoting from American Bee Journal, page 806, you aid and abet the promulgation of the idea that a laying-worker can be "seen and told by her looks." Now you may get from W. W. McNeal full instructions for the identification of laying-workers, said instructions duly certified before the proper officer of the law, and neither you nor any other bee-keeper on that side the line can pick out for sure a laying-worker, even if one-fourth the workers are engaged in that interesting occupation, unless you surprise them in the act. This assertion failing to prove true, you are at liberty to administer such knuckle-cracking as the merits of the case and your sympathy for the culprit may dictate.

Not Safe to Trust to a Single Queen-Cell.—A. Maujean asks in Le Rucher Belge whether you are sure you will have a good queen when you have, to all appearance, the very best queen-cell. Sometimes queens are dead in cells, even dying after they are sealed. In his experience he has had a cell perfectly formed and sealed, but with no queen whatever in it; the cell containing only a little royal jelly, the larva having probably died when very small and shrunk to nothing, leaving no trace.

Deep Hive-Entrances.—Deep entrances prevented entirely lying-out the past summer for James L. Montgomery (Gleanings), but Mr. Doolittle says it is about the same whether bees lie out in idle clusters, or in idle clusters in room made for them by deep entrances under the hive. But Mr. Montgomery scores a point for deep entrances when he says that colonies in 8-frame hives with deep entrances swarmed very little, "while those without the deep entrance have all swarmed, some of them twice."

How Field-Bees Unload.—Doolittle says in Progressive Bee-Keeper that after having watcht hour after hour he believes that not one bee in a thousand returning with a load of honey ever enters the sections till it has given up its load to a young bee an inch to six inches from the entrance. The field-bee rests a few moments to half an hour, then goes fieldward again. The young bee evaporates the nectar, and if the yield of nectar is too big to be evaporated by the young bees they deposit some of the nectar in the cells, and at night all hands turn to evaporate.

Scale Colonies.—The practice of having a colony on scales to note daily gain or loss is commended by R. C. Aikin, in Gleanings. But he thinks it unwise to depend on a single colony as an index of what all are doing, for it may be that such colony may be working in a different quarter from most others, and this is one of the ways perhaps in which may be explained the difference in results of two colonies apparently alike in all respects getitng such different yields in the same apiary. To get satisfactory results, he thinks there should be two or more colonies noted.

Simmins' Direct Introduction of Queens.—In Bee-Chat, the new English quarterly bee-paper, edited by S. Simmins, he gives the following rules to be observed in his plan of direct introduction of queens. 1. Keep the queen *quite alone* for not less than 30 minutes, without food, but warm. 2. Insert after dark, under quilt, first driving the bees back with smoke. 3. No further examination is to be made until after 48 hours has expired. 4. Make no division of, or nucleus from, the hive within three days prior to insertion, unless the original queen is then left on her own stand.

Points in Using Plain Sections.—L. A. Aspinwall is one of the men who have successfully used plain sections, and he gives a valuable article in Review, especially valuable as it points out some of the troubles to be avoided. Accurate measurements must be used, and the space above and at the sides, where vertical passages are used, must not be more than ¼ inch, and at bottom 3/16. Even then there will be bulging if bees are crowded for room, and burr-combs will be built throughout the hive, so supers must be promptly removed when filled. Parenthetically he remarks that bees will put burr-combs in ¼-inch spaces between and above top-bars if there is a scarcity of room. Greater care is required in handling and crating, putting not more than one or two sections with bulged edges in a crate if there are such sections. He thinks no-drip cases are not needed with plain sections, for even with veneers the plain sections come together so close that drip will not get through. He uses tin separators of peculiar construction, and scores a point in favor of tin by saying: "To scrape propolis from a thousand separators is no small task. But with a large kettle of boiling water, a thousand or more made of tin may be cleaned in 15 or 20 minutes."

GENERAL ITEMS

Mr. Pettit and His Divider.

I would like to ask Mr. S. T. Pettit, of Canada, the following question: After quoting what he says in his article, on page 51, he says, "Here is a point I must call attention to....There must be no passageways for the bees outside the followers; the bees must be kept and obliged to do their coming right against the divider," etc.

Why is it that the bees must be compelled to enter thus? I ask the question because his recommendation seems to be very imperative as to this. Then following he says: "I have thought a good deal about it, and can hardly tell why....I like to have space between the divider and the super wall." Now I suspect he has been reading of my method of producing comb honey, for that's just where I permit the bees to enter, even from the bottom of the hive on up to the topmost super, having provision made to enter each super if they wish, or go from the bottom of the hive to the top super direct, and I am thinking that after he tries the space 5-16, $\frac{1}{4}$, $\frac{3}{8}$ or $\frac{1}{2}$ inch, he will feel like saying, "I wish I hadn't said there must be no bee-space." Any way, such positive directions are misleading, but unintentionally given in writing, especially on bees and their habits, I think, very frequently. J. A. Golden.

Morgan Co., Ohio.

Wintering Well—Season's Report.

My 64 colonies in the home apiary seem to be wintering pretty well, all packt in chaff on the summer stands. I have 28 colonies $2\frac{1}{2}$ miles away, 16 of which having only a cushion on top; they don't seem to be wintering as well so far, altho the winter has been quite mild up to this time.

My bees did quite well last season. I began the season with 87 colonies, closed with 92, and took 6,000 pounds of honey of fine quality, about 1,200 pounds being comb in pound sections, which is all sold at 7 and 8 cents per pound for extracted, and 10 to $12\frac{1}{2}$ for comb honey. Our home market is in a fair way to be ruined with cheap honey.

I began bee-keeping 18 years ago with one colony in a box-hive. I had the genuine bee-fever, and I've got the same disease yet. I feel that if I should happen to live the allotted life of man, my bee-keeping experience has just begun, as I am now only 33 years old. I have been a constant reader of the American Bee Journal for about 16 years, and it has been of great value to me. B. W. Peck.

Ashtabula Co., Ohio, Feb. 1.

Experience with Bees.

I have had many years' experience with the bees, and could not look for success in the business without the American Bee Journal. I was a subscriber away back in the early 60's, when it was publisht by Samuel Wagner, in Washington, D. C. We are never too old or too wise to learn. In those years I considered myself well up in bee-lore, tho I made no claim to being an expert. But failing health compelled me to drop out of the business for 15 years. On the partial recovery of my health the old passion for bees revived, and I have been trying to do a little at the business for the last three years; a trifle over a year ago I subscribed again for the "Old Reliable," and the first number received revealed the fact that the procession had moved on and I was left a long distance in the rear. I have recovered some of the lost distance in the last year. I recollect no season in my experience when we obtained more satisfactory results from our labors with the bees (except prices) than the last.

I commenced last spring with 10 colonies in the 8-frame dovetailed hive, one queenless, and increast them to 19. I cut off all second swarming by following Mr. Heddon's plan, that is, by setting the young swarm on the old stand, leaving the old hive by its side for a week, then removing it to a new stand. This plan proved successful, and less trouble than any I have ever tried. My plan has usually been to hive all after-swarms in an empty hive, cap, or convenient box, let them stand until evening, then shake them down in front of the parent hive and let them run in. I don't remember a swarm treated in this way issuing the second time. This plan requires more care and labor, and a greater risk of loss.

I obtained 1,050 one-pound sections of honey. The best colony stored 167 sections. I have been a little slow in using separators in the supers; the reason was, I believed the bees would not accept it as readily, and do as good work in the supers with as without them; but after using them one season, and taking into account the perfect shape, uniformity of combs, and ease in handling and packing, I could not be induced to abandon their use.

Bees went into winter quarters in fine condition, packt in chaff on the summer stands, and are doing well up to date. I am patiently and anxiously waiting for the time when I can again hear their busy hum. L. Jones.

Floyd Co., Iowa, Feb. 2.

A Report—Bee-Management.

I commenced the season of 1897 with 15 colonies, got 1,160 pounds of honey, and increast to 24 colonies, all going into the cellar in good condition. I sold all of my honey on the home market at from 10 to 14 cents.

I got my best yields from prime swarms, from colonies in 10-frame hives, hived on the old stands in 8-frame hives. The 8-frame hive isn't large enough to cast the kind of swarms I want, so I will use 10-frame hives the coming season, and contract to 6 or 8 frames for the new swarms, and hive on the old stands; then give the balance of the 10 frames after the basswood and clover harvest is over, and extract any surplus then, and the parent colonies may gather in the fall. I will leave the 10 frames in to get large prime swarms from the next season.

White clover yielded immensely here for a short period last season. The basswood was an entire failure. Wire-weed and golden-rod yielded well in the fall, considering the drouth.

I clip all queens as soon as fertilized, and supersede all queens at three years old, or rather I intend to from this time on. I don't want to be bothered with old queens playing out in the pinch of the game.

Rufus Williams.

Lawrence Co., Ind.

Several Notes and Comments.

I was sorry to hear that Dr. Besse had lost in his sweet clover lawsuit, for I was real interested in watching the reports concerning it, and hoped that he would win.

As will probably be remembered, along last July several fellows used adulterated means for getting some honey out of my storehouse. I reported the same at the time, and Editor York hoped that an example would be made of them, as I caught them and landed them behind the bars. Well, one of them broke jail and got away, while the other fellow is putting in time at the "Pen," on a two years and six months' sentence.

Now, the above fellow used adulterated means to get honey, while some others used adulterated honey to get means. What is the difference twixt the two? [One is mean enough to adulterate, and the other is adulterated enough in himself to be mean. —Ed.]

Yesterday was a nice, sunshiny day, and all my bees were out; thus far every colony that was put into winter quarters has responded to the roll call of "Old Sol." My bees are mostly the yellow strain. I also

DR. PEIRO,
CENTRAL MUSIC HALL, CHICAGO.

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have some leather-colored; all seem to winter alike. They are outside, packt in chaff. I have a few colonies of common bees, and one peculiarity I have noticed is, that on the bottom-board of the common bees there are quite a few tiny white wax-scales, while I find none among the Italians.

By the way, the American Bee Journal appears to be getting better and better, every issue seems to be an improvement on the former one. Dr. Gallup's recollections are just excellent. H. G. QUIRIN.

Huron Co., Ohio, Feb. 9.

Wintering in Canada.

Lots of snow, and wind and weather nowadays here. I have just 80 colonies of bees in the cellar, and only 2 out-doors, and I believe there is more pain and suffering in those two than in the 80 that are so snug and nice in the cellar.

S. T. PETTIT.

Ontario, Canada, Feb. 3.

New Union—Question for Mr. Russell.

On page 125, Wm. Russell asks whether the constitution of the new Union cannot be made wide enough to take all in without having to pay two membership fees. Will he kindly tell what there is in the new constitution to hinder exactly what he wants? Also, how he would go to work in any different way than the new Union has done, to get all united in one strong organization? What does he want the new Union to do before he joins?

INQUIRER.

Success in Bee-Keeping.

I have been a bee-keeper five years, and have made a success. I have not lost a full colony in any way, and with the exception of 1894 I have had a good crop of honey. When I began people told me that bees did not pay any more, and some of them had kept bees for several years without getting any honey to speak of. In 1895 I harvested 50 pounds per colony; in 1896, 82 pounds per colony; and in 1897, 80 pounds. By 1896 people began to enquire how I managed, and last year they adopted my plans, taken mostly from the American Bee Journal, and they are getting to be bee-cranks. Big hives with plenty of honey, and reasonable care in winter, will solve the problem for the farmer, as nearly as it will ever be solved. W. S. DONER.

Pottawattamie Co., Iowa, Feb. 8.

A Report for 1897.

I commenced the spring of 1897 with three colonies of black bees, also bought one two-frame nucleus of Italians, for which I paid $1 85. I increast to 12 colonies, and took 170 pounds of comb honey. The Italians did not swarm until July 16, when I hived the swarm and placed them on the old stand, removing the parent hive to a new stand. The next day I was about to put a super on from the parent hive; I took the cover off, and there the first thing I saw was a young queen on top of the sections. I put her into a glass, went back to the hive and found another queen; I caught her also, took the super off, and found two young queens in the body of the hive. I then divided the colony, and left a queen in each part, making three from one nucleus, and two queens over. July 26 the two young queens were laying, and made good colonies, with plenty of honey for winter. D. PATTERSON.

Decatur Co., Iowa, Feb. 9.

Figwort—Viper's-Bugloss—Bloodroot.

I want to enter a mild protest against what has been said lately in favor of the Simpson honey-plant (Scrophularia nodosa or figwort). The honey is abundant in each little cup, and may be all right for feeding back to the bees; but in my opinion unfit for table use. The "A B C of Bee-Culture" describes it as *a little dark!* It is, in fact, as dark as charcoal, and of repulsive taste and smell as the plant itself. Seeing it recommended, I bought some seed few years ago to try the honey. I am done with it now.

About the same time I tried another honey-plant be viper's-bugloss, called also "blue thistle" (Echium vulgare); it is a biennial, and a good fertilizer if we judge from its large, long taproot. "A B C of Bee-Culture" says that "it produces a beautiful white honey;" now this is not exactly the case with the plant I have had. The honey is rather dark, like that of buckwheat, but the flavor is all right. Each plant in a good soil will produce 8 to 10 long stalks, and, each of these, hundreds of nice blue, reddish flowers, from July to October in my place. Animals will not touch it on account of its prickly leaves. It is also a medicinal plant, as the borage.

I have also had quite an experience with the blood-root (Sanguinaria canadensis), of which there is an abundance here. Bees in early spring revel on its white flower to gather the reddish pollen—one of the earliest flowers here. It is a sight to see three or four bees trying at the same time to get a load of its pollen. The plant is a perennial, and most easily propagated from the root; and since it blooms before any leaves are out, may be spread under shady spots.

H. DUPRET.

Province of Quebec, Canada.

The Prospects in California, Etc.

I was very fortunate the past year in securing a good crop of honey, part comb and part extracted. The former I disposed of at an average of 10 cents, and I hold the latter for better prices, and judging from present prospects the coming season is destined to score another failure. As a rule, the greater portion of our rainfall comes previous to Feb. 1, but up to this time the precipitation has been in small quantities and at long intervals, and never before during my 10 years' residence in this State have I witnest such discouraging prospects for those who are dependent upon grain-production, as the present; and then this has a special bearing on our own industry, for they, as a rule, succeed in securing a crop when we fail.

Those who were present at the State convention enjoyed a rare treat in meeting and listening to Thos. W. Cowan, and I desire to say that there is plenty of room for such as he, at all times and on all occasions, in this, the Golden State.

GEO. W. BRODBECK.

Los Angeles Co., Calif., Feb. 2.

Bees in Fine Condition.

My bees are in fine condition at present in the cellar, with the temperature at 40 degrees above zero.

We are having some cold weather now, with plenty of snow, which I think is a good thing for clover, which was in fine condition last fall. We almost always get a good crop of honey when we have plenty of snow.

I have taken the American Bee Journal for about 15 years, and I had it stopt at New Years because I thought I was going to leave the bees, and go at something else, but as long as I keep bees I want the Bee Journal. I was away and saw Willian Anderson, who lives about 12 miles from my place; he has about 100 colonies, and has never read any bee-paper, so I got him to let me send and get the American Bee Journal for him. He takes great interest in bees, and winters them in a cellar. His bees were in good condition when I was there. J. F. WIRTH.

Henry Co., Ill., Feb. 3.

Looking Ahead—Season of 1897.

The winter is rapidly drawing to a close, and I presume all bee-men are directing their thoughts and planning for the coming honey harvest, which of course we expect.

Bees in this locality went into winter quarters strong in stores and in numbers, and up to date have wintered well. We

Sweet ⁂ Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order·

	5lb	10lb	25lb	50lb
Sweet Clover (white)	.60	$1.00	$2.25	$4.00
Alsike Clover	.70	1.25	3.00	5.75
White Clover	.80	1.40	3.00	5.00
Alfalfa Clover	.60	1.00	2.25	4.00
Crimson Clover	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

GEORGE W. YORK & Co.
CHICAGO, ILL.

Southern Home of the Honey-Bee

Is now ready for your orders for QUEENS of either **3 or 5 Banded Italians and Steel Grey Carniolans.** More than 300 Tested Queens to begin with. Untested, either race, 75 cts. each; June and until October 50 cents each. Tested $1.00 each. Good Breeders, $2 each. Straight 5-Banded or "Faultless" Queens, $5.00 each. Satisfaction guaranteed.

GEO. W. HUFSTEDLER,
Successor to Hufstedler Bros.,
3Atf BEEVILLE, Bee Co. TEX.
Please mention Bee Journal when writing.

Muth's HONEY-EXTRACTOR
Square Glass Jars.

Root's Goods at Root's Prices.

BEE-KEEPERS' SUPPLIES in general, etc etc,
Send for our new catalog.
Practical Hints" will be mailed for 10c in stamps. Apply to—

Chas. F. Muth & Son, Cincinnati, Ohio.
Please mention Bee Journal when writing.

OUR PRICES are worth looking at. We are making the new

Champion Chaff-Hive

with dovetailed body and supers, and a full line of other Supplies, and we are selling them CHEAP. A postal sent for a price-list may save you $$$$

R. H. SCHMIDT & CO.,
Box 187 SHEBOYGAN, WIS.
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☞ IF YOU WANT THE
—BEE-BOOK

That covers the whole Apicultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keeper's Guide.

Liberal Discounts to the Trade.

PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y.
Please mention Bee Journal when writing.

BEE-KEEPERS! Let me send you my 64-page Catalog for 1898.

J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing.

have had an unusually mild winter thus far; bees could have been wintered on the summer stands with little protection without any loss. Most of mine are on the summer stands.

The honey year of 1897 ended quite well. The forepart of the summer was unpropitious for honey-gathering; there was an abundance of white clover bloom, and other honey-producing shrubs and trees, but owing to the cold and wet we got but very little honey, but later on the weather grew warmer, and bees did fairly well in gathering honey from Alsike clover, buckwheat, golden-rod and asters. I think I am safe in saying that the average per colony in these parts would be 50 pounds.

The "Old Reliable" comes regularly to my table—a most welcome guest.

Clark Co., Wis., Feb. 5. L. ALLEN.

The Nickel Plate Road

changed time and also depots March 6, 1898. All trains now arrive and depart from Van Buren Street Station, near Clark St., Chicago. All trains on "L" loop stop at Nickel Plate Depot. City Ticket Offices, 111 Adams Street, and Auditorium Annex. Telephone Main 3389. (5) 11A2t

Convention Notices.

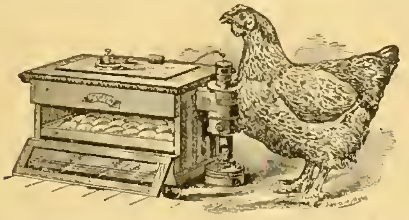
Texas.—The Texas State Bee-Keepers' Association will hold its annual convention at W. R. Graham & Son's, Greenville, Texas, the first Wednesday and Thursday in April, 1898. All interested are invited.

W. H. WHITE, Sec.

Utah.—The Utah State Bee-Keepers' Association will hold its semi-annual convention in the City and County Building, Salt Lake City, April 5, 1898, at 10 a.m. A full program in the interest of the industry will be presented. It is very desirable to have all parts of the State represented. Among other things to be considered is the transportation and marketing of our products, and also the adoption of the best plan to represent our State at the Trans-Mississippi Exposition, and to get our new foul brood law into active operation. Every bee-keeper should be interested in these matters. All are cordially invited. In case there may be any that cannot attend, we would be pleased to have their address, and have them send in questions on general topics. Several members of the Association have desired us to again call the attention of our bee-keepers to the Langstroth monument fund. Any who feel able should threw in their mite to mark the last resting-place of this the greatest of all American bee-keepers. No one will feel as if it was labor in vain, who takes a fraternal interest in this desirable object.

JOHN B. FAGG, Sec., East Mill Creek, Utah.
E. S. LOVESY, Pres., Salt Lake City, Utah.

"The Wooden Hen."—The little illustration shown herewith is small only in size, but really large in magnitude, when we consider that the "Wooden Hen" is no larger than a live hen, yet has double the capacity. It weighs only 15 pounds, has a capacity of 28 eggs, and while not a toy, is just as amusing, besides being instructive as well. We doubt if a more acceptable or more valuable present could be made to the farmer boy or girl, and we suggest that every one of them who read the American Bee Journal write Mr. Geo. H. Stahl, Quincy, Ill., and ask him for a copy of his handsome little booklet describing the "Wooden Hen;" also his large catalog of the Model Excelsior Incubator. Tell him you write at the suggestion of the American Bee Journal.



Bee-Keeper's Guide—see page 189.

TREE PLANTING

may be a way to wealth or a waste of money—depends on the kind of trees. All trees, plants, vines, from the Reid Nurseries are No. 1 stock, true to name. You gain by buying now. Prices were never so low. Write for illustrated catalogue, suggestions, estimates. Try **Star Strawberry, Eldorado Blackberry** for profit.

REID'S NURSERIES, Bridgeport, Ohio.

Listen! Take my Advice and Buy ⁂ Your Bee-Supplies ⁂ of August Weiss!

FINE FOUNDATION AND TONS OF IT. Working Wax into Foundation a Specialty.

I DEFY competition in Foundation

Millions of Sections—Polisht on both Sides!!

SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalogue and be your own judge. Wax wanted at 26 cents cash, or 28 cents in trade, delivered to me.

AUGUST WEISS, Hortonville, Wisconsin.

Ho, for Omaha!

As we have many customers in the Northwest, and believing they will appreciate the low freight rates obtained by purchasing goods from a railroad center nearer to them than we are, getting a direct through-freight rate, thus cutting the freight in half, we have establisht a branch house at 1730 South 13th St., Omaha, Neb., where we will keep a complete line of all Apiarian Supplies, the same as we do at Higginsville, Mo. With the quality of our goods, we believe most bee-keepers in the West are already acquainted, but to those who are not, we will say that our goods are par excellent. Polisht, snowy-white Sections, beautiful straw-transparent Foundation, improved Smokers and Honey Extractors, and all other first-class goods, are what we sell. Kind and courteous treatment and honorable dealing our motto. On these bases, we solicit an order, feeling sure that if we sell you one bill of goods you will be our customer in the future.

☞ PROGRESSIVE BEE-KEEPER, 50c per year. "Amateur Bee-Keeper," 25c. Both for 65c., postpaid. Sample copy of the PROGRESSIVE free, and a beautiful Catalog for the asking.

Address, Leahy Manufacturing Company, Higginsville, Mo., or 1730 South 13th St., Omaha, Neb.

GOLDEN BEAUTIES...

Three-band Italian Queens reared from Root's stock. Golden Queens, from the best selected stock, Untested, 50 cents; Tested, 75 cents. Carniolan Queens at same price.

E. Y. TERRAL & CO.,
Cameron, Texas.

12Atf Mention the American Bee Journal.

BEES! Florida Italian QUEENS!

Tested Queens, $1.00 each; Untested, 50c. 2-Frame Nucleus of Bees with good Queen $2. Prompt and satisfactory dealing.

Address, **E. L. CARRINGTON,**
11Atf De Funiak Springs, Fla.

FOR SALE 100 colonies of **BEES** in Langstroth and Root's Dovetailed Hives. Will sell in lots to suit purchasers, and deliver on cars for shipment to any point. For further information address, J. W. HOWELL, Kenton, Tenn.

BEES, HONEY, MONEY

Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

J. P. H. BROWN, Augusta, Ga.

Please mention Bee Journal when writing.

FREE FOR A MONTH.

If you are interested in sheep in any way you cannot afford to be without the best and only weekly sheep paper published in the United States.

WOOL MARKETS AND SHEEP ⁂

has a hobby which is the sheep breeder and his industry, first foremost and all the time. Are you interested? Write to-day

Wool Markets & Sheep, - - Chicago.

Please mention Bee Journal when writing.

The Bee-Keeper's Guide

This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

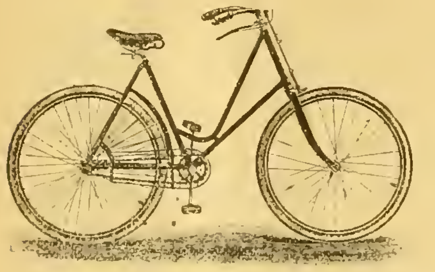
A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."

Given For 2 New Subscribers.

The following offer is made to PRESENT subscribers only, and no premium is also given to the two new subscribers—simply the Bee Journal for one year:

Send us **Two New Subscribers** to the Bee Journal (with $2.00), and we will mail YOU a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both together for only $1.75. But surely anybody can get only 2 new subscribers to the Bee Journal for a year, and thus get the book as a premium. Let everybody try for it. Will you have one?

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.



A Good Bicycle Free

Now, then, young men and young ladies, also boys and girls, take advantage of this offer and get a Wheel (**A THOROUGHLY GOOD ONE**) with a little work. To increase our circulation we have made arrangements with a first-class concern in this city to furnish us with their well-known

ALAMO WHEELS

at a price which enables us to give one **FREE** as a premium for sending us **50 New Subscriptions** to the Bee Journal at $1.00 each. You can send them in as taken, and when your list of 50 is complete, we will ship your beautiful wheel, *freight paid*, to your nearest depot. This wheel retails in the ordinary way at $50.00—and it concerns nobody but ourselves how we managed to get in on the inside cut price. For *40 Subscriptions* we will ship a Juvenile of the same make. Below we give *specifications:*

Frame—Shelby Seamless Tubing. 1⅛ Main Frame. Connections—Steel (selected.) Fork Crown—Oval (drop forged.) Handle Bars—Steel or wood, drop or upturn; cork grips. Wheels—28 inch Pedals—rat trap. Rims—best elm. Tires—Morgan & Wright or Vim. Spokes—selected piano wire. Bearings—Tool steel (turned by experts.) Gear—64 to 80. Saddle—leather (rubber or felt neck.) Weight—23 to 25 pounds. Color—black, maroon, nicely striped. Special color by arrangement. Furnishings—Tool bag oiler, wrench, air pump, etc.

Ladies' model built on same lines with the usual difference between sexes, such as rubber pedals, etc.

Address.

GEORGE W. YORK & CO., 118 Michigan St., CHICAGO, ILL.

We want ....

EVERY BEE-KEEPER

......To have a copy of......

Our 1898 Catalog

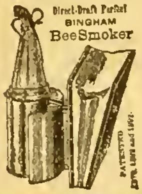
☞ Send us your name and address and we will take pleasure in mailing you a copy

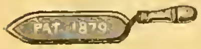
G. B. LEWIS CO., WATERTOWN, WIS.

Special Agent for the Southwest—

E. T. ABBOTT, St. Joseph, Mo.

Mr. Abbott sells our Hives and Sections at factory prices.





Bingham & Hetherington Uncapping-Knife.

PRICES OF BINGHAM PERFECT

Bee-Smokers and Honey-Knives!

Smoke Engine (largest smoker made)	4-in. stove.	Doz. $13.00;	each, by mail,	$1.50
Doctor	3½ in. stove.	Doz. 9.00;	"	1.10
Conqueror	3-in. stove.	Doz. 6.50;	"	1.00
Large	2½-in. stove.	Doz. 5.00;	"	.90
Plain	2-in. stove.	Doz. 4.75;	"	.70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz. 4.50;	"	.60
Honey-Knife		Doz. 6.00;	"	.80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4 inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

Mr. Bingham, Dear Sir:—Please send per mail a 4-inch Smoke Engine. I have one of your Smokers; it is too small in time of trouble.

February 21, 1898. A. F. SEWARD, Riverside, Calif.

9A9t **T. F. BINGHAM, Farwell, Michigan.**

Page & Lyon Mfg. Co.

New London,
——Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

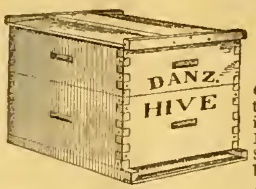
Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

Please mention the American Bee Journal. 7Atf

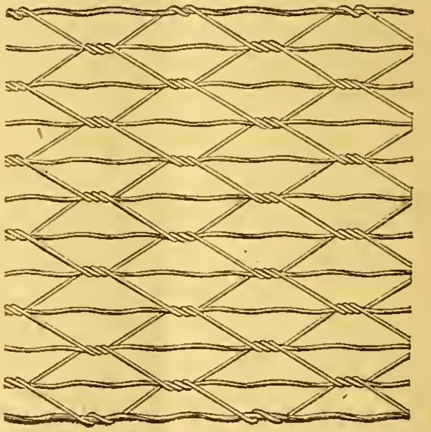


$100

Given as **Bounties** to purchasers of the improved Danz. Hives and Sections See schedule in my bee-book "Facts About Bees." Tells how to produce honey that sells for the most money. Free for 2c in stamps. Address

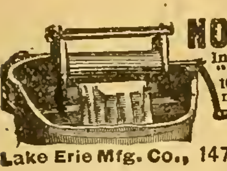
THE A. I. ROOT CO., Medina, Ohio,
or F. DANZENBAKER, Box 466, Washington, D. C.

The Kitselman Up-to-Date Fence.—The fence here shown is made of a high grade of Galvanized Coiled Spring Wire, with the Duplex Automatic Ball Bearing Woven Wire Fence Machine, which is made entirely of iron and steel, and is so simple and easily operated that any one who knows how to turn a grindstone can take it right into the field or any place and make 50 to 80 rods a day of the best fence on earth, horse-high, bull strong, pig, chicken or rabbit tight, at a cost for the wire of only 12 to 20 cents a rod. Messrs. Kitselman Bros., Ridgeville, Indiana. whose advertisement appears elsewhere in this paper, claim the Duplex Automatic Ball Bearing Machine is the result of their 10 year's experience in the manufacture of woven wire fence machines, and is Perfection Itself. Send for their illustrated catalog which fully describes 24 different designs of fence, not forgetting to say you saw their advertisement in the American Bee Journal.



Get Your Money's Worth.—If there is one thing above another that produces comfort and pleasure in the conduct of business, it is the absolute certainty that you get full value for your money when you make a purchase. We do not wonder, therefore, that people turn to those individuals or companies who offer a positive guarantee of quality to the purchaser. A good many manufacturers are now sending out their goods on trial with the proviso that if not satisfactory in every way, they may be returned. This is true of our advertising patrons, The Marilla Incubator Company, of Marilla, N. Y., who manufacture the incubators and brooders of that name. That these people make good machines and deal fairly with the public cannot be doubted if we consider their own business proposition in which they say—"Our only argument: we ship a machine that will give satisfaction or it is not a sale." Write these people for catalog, prices, etc., and mention the American Bee Journal.

The Page Woven Wire Fence.—The Page Woven Wire Fence Company's illustrated Catalog will be sent FREE to any person asking for it; it shows many styles of their fences and contains much valuable information about setting end and anchor posts. The Lithograph of the Manufactory at Adrian, Michigan, exhibits something of its magnitude. It is claimed that they manufacture more Woven Wire Fence than all others combined. Their fence is used in almost every country on the face of the earth. They have, within the last five years, manufactured enough fence to entirely encircle the earth, and average 12 horizontal wires high, and used about 500,000 miles of wire Address the Page Woven Wire Fence Company, Adrian, Mich., for a catalog, and be sure to mention that you saw their advertisement in the American Bee Journal.



NO DIRT LEFT
In clothes washed with the "BUSY BEE WASBER." 100 pieces in one hour and no hard work done. That's the record. AGENTS WANTED. Exclusive sale. Write for terms.
Lake Erie Mfg. Co., 147 E. 13 St., Erie, Pa.
44E26t Please mention the Bee Journal.

POULTRY PAPER, illus'd, 20 pages, 25 cts. per year. 4 months trial 10 cts. *Sample Free.* 64-page practical poultry book free to yearly subscribers. Book alone 10 cts. Catalogue of poultry books free. *Poultry Advocate*, Syracuse, N.Y.
10A6t Please mention the Bee Journal.

Queens, Bees and Bee-Keepers' Supplies

Tested Queens in April and May, $1.00. Untested, 75c. Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

F. A. CROWELL,
8Atf GRANGER, MINN:

Bee-Hives, Sections, Shipping-Cases—everything used by bee-keepers. Orders filled promptly. Send for catalog. MINNESOTA BEE-KEEPERS' SUPPLY MFG. CO., Nicollet Island, Minneapolis, Minn.

Texas Queens

Best honey-gathering strain in America. Tested, $1.50. Untested, $1.00. Write for a Circular. **J. D. GIVENS, Lisbon, Tex.**
7A26t Please mention the Bee Journal.

"WATCH POUDER'S AD"

SEE THAT WINK!
Bee-Supplies! ROOT'S GOODS at Root's Prices.
Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Cat. free. Walter S. Pouder,
512 Mass. Ave.,
INDIANAPOLIS, INDIANA.

QUEENS Untested, after April 1, $1; Tested $1.50; Select Tested, $2. Imported queens, direct from Italy, $5 each. The best of stock, either Golden or Leather Colored. Write for price-list. HUFFINE & DAVIS,
11A4t Ooltewah, Tenn.

Wide-Tired Wagon Wheels.—Elaborate tests of the draft of wide and narrow-tired wagons have just been completed by the Missouri Agricultural College Experiment Station, Columbia, extending over a period of a year and a half. These tests have been made on macadam, gravel and dirt roads in all conditions, and also on the meadows and plowed fields of the experimental farm. Contrary to public expectation, in nearly all cases draft was materially lighter when tires six inches wide were used, than with tires of standard width. The load hauled was in all cases the same, and the draft was most carefully determined by means of self-recording dynamometer. The beneficial effect of the wide tire on dirt roads is strikingly shown in some recent tests at the station. A clay road, badly cut into ruts by the narrow tires, was selected for the test, as presenting conditions least favorable to the broad tire. A number of tests of the draft of the narrow tire were made in these open ruts, and immediately followed by the broad tires running in the same ruts. The first run of the broad tires over the narrow ruts was accompanied by an increased draft; the second by a draft materially less than the original narrow tire, third by a still greater decline, and in the fourth trip the rut was practically obliterated and filled. In another trial, when a clay road was so badly cut into ruts as to be almost impassable for light vehicles and pleasure carriages, after running the six inch tires over this road 12 times the ruts were completely filled, and a first-class bicycle path made.—Columbia Herald.

Put wide tires on your wagon. You can buy wheels of steel or wood to fit your wagons with these wide tires at reasonable prices, and the Electric Wheel Co., of Quincy, Ill., have a book called "Preservation of Farm Profits," which they send free to any one upon application, which is full of information on this subject. Write them for it, and tell them you saw the notice in the American Bee Journal.

BEE-SUPPLIES!
We have the best equipt factory in the West. Capacity 1 car load a day; and carry the largest stock and greatest variety of everything needed in the apiary, assuring best goods at the lowest prices, and prompt shipment.
Illustrated Catalog, 72 Pages, Free.
We also manufacture TANKS of either wood or galvanized steel, all sizes, any form, and for all purposes. Price-list Free. Address,
E. KRETCHMER, Red Oak, Iowa.
8E13t Please mention the American Bee Journal when writing.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Ill., Mar. 8.—A little fancy white sells at 11c. if free from any indication of graining, but the majority of white honey sells at 10c., with off grades at 8 to 9c.; amber is not selling readily at 8c.; dark, 7 to 8c. Extracted, white, 5 to 6c.; amber, 4½ to 5c.; dark, 4c. Beeswax, 26 to 27c., and in active demand. The weather is now suitable for shipments of comb.

Milwaukee, Wis., Mar. 8.—Fancy, 11 to 12c.; A No. 1, 10 to 11c.; No. 1, 10 to 10½c.; No. 2, 9 to 10c.; amber and dark, 7 to 8c. Extracted, in barrels, kegs and cans, white, 5 to 6c.; dark, 4½ to 5c. Beeswax, 25 to 27c.

We are able to report an improved demand for fancy honey during the past few days, while the medium grades have also sold better, yet the surest sale is on the BEST. The supply continues equal to the demand, but the fancy grades are not in as good supply as the low and medium, which goes to prove that the fancy sells best—and the values better

Buffalo, N. Y., Mar. 11.—There is a good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand.

New York, N. Y., Feb. 9.—There has been a fair demand for comb honey of late, and we are gradually reducing our stock. Fancy white is scarce and finding ready sale at 10 to 11c; off grades white and amber, 8 to 9c.; mixt and buckwheat, 6c. Extracted is in fair demand—California white, 5½c; light amber, 5c.; white clover and basswood, 4¾ to 5c.; buckwheat, 4c.; Southern, 50c. a gallon. Beeswax is steady at 26 to 27c.

Cincinnati, Ohio, Feb. 21.—There is a slow demand for all kinds of honey. We quote 10 to 13c. for best white comb honey, and 3 1-2 to 6c., for extracted. Beeswax is in fair demand at 20 to 25c. for good to choice yellow, with a fair supply.

Cleveland, Ohio, Feb. 22.—Fancy white, 12 to 13c.; No. 1, 11 to 12c.; No. 1 amber, 9 to 10c. Extracted, white, 6 to 6½c.; amber, 4 to 5c. Beeswax, 22 to 25c.

Kansas City, Mo., Feb. 19.—Fancy white comb, 1-lbs., 10c.; No. 1, 9 to 10c.; amber, 8 to 9c.; dark, 7 to 8c. Extracted, white, 5 to 5 1-2c.; amber, 4 1-2 to 5c.; dark, 4c. Beeswax, 20 to 22c.

The supply of honey is large and the demand light.

St. Louis, Mo., Feb. 9.—Fancy hite comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

Detroit, Mich., Feb. 1.—Fancy white, 11 or 13c.; No. 1, 10 to 11c.; fancy amber, 9 to 10c.; No. 1, 8 to 9c. Darker grades are selling lower and in better supply, and can be bought at 6 to 7c. Extracted, white, 5 to 6c.; darker grades, 4 to 5c. Beeswax is in good demand at 26 to 27c.

Indianapolis, Ind., Jan. 15.—Fancy white, 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand.

Boston, Mass., Jan. 18.—Fancy, in cartons, 12½ to 13c.; in glass, 11 to 12c.; A No. 1, 10 to 11c.; No. 1, 9c.; No. 2, 8c.; No. 3, no sale. Beeswax, 27c.

The demand for honey is light on all grades, with a full supply. Pure beeswax is in good demand, but supply is light.

Philadelphia, Pa., Jan. 18.—Fancy white, 10c.; No. 1, 9c.; amber, 8c. Extracted, white, 5c.; amber, 4c.; dark, 3½c. Beeswax, 28c.

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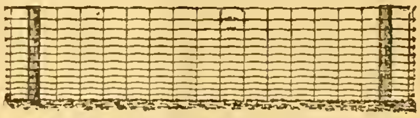

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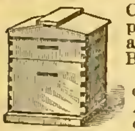

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38th Year. CHICAGO, ILL., MARCH 31, 1898. No. 13.

CONTRIBUTED ARTICLES

Taking the Bees Out of the Cellar.

BY DR. C. C. MILLER.

Having received a letter from Mr. M. M. Baldridge, a part of which is of such general interest, I send it for publication, as follows:

FRIEND MILLER:—My 31 colonies of bees in the cellar were taken out to fly, and to remain out, on March 8. It was warm enough on March 7, but there was too much snow on the ground. On March 8 I waited till the afternoon, so as to have as little snow as possible when the bees would begin to fly. I began at 1 p.m. to carry the bees out, and had them all out by 2:30. They had a very good flight, but a much better one on March 9. It was 54° in the shade at 1 p.m. March 8, and 56° at 2:30. The next day it was up to 64° in shade. I am glad to have the bees out-doors now, and that they had such a good flight.

I had one colony out-doors all winter, packt in planer-shavings. I rather think it has wintered all right, but the bees did not fly therefrom until March 8, and not then until it was over 50° in the shade!

As I do not touch my bees for at least a month or six weeks after they are put out to fly, I cannot tell very well till then how well they have wintered. I may then be able to determine whether the packt colony out-doors has wintered better than those in the cellar. I am at present inclined to think that a less number of bees have died in that colony than in any of the others. My cellar is pretty warm, but none

Apiary of F. J. R. Davenport, in Ellis County, Texas.

too warm to suit me. The temperature runs from 45° to 60° when the bees are in the cellar. It is a small room, partitioned off from the main cellar, has a board floor, and is lined on three sides with boards and leaves.

My bees were taken to the cellar in November, 1897—the 21st, I think. They had a nice flight the day before, when the temperature was 66° in the shade. It would have been just as well to have left the bees out till about the first of December, or later. I like to put bees in *late* and take them out *early*, as nearly as possible to the first of March. In 1897 I got them out the latter part of February. It was an ideal day for bees to fly, being over 60° in the shade, and no wind.

I prefer to watch the temperature and other conditions, and take out the bees in the daytime, and when they can fly *at once*. To make them do this I use smoke in the cellar. I puff some into the entrance of each hive when ready to be taken out. This drives the bees back among the combs and stirs up the entire colony. I can now take the colony out-doors with no danger of stings, and as soon as the bees are on the stand they are ready to begin to fly. I want all the bees to fly that wish to at once, and I pay no attention to the stand, or part of the yard the hives were on in the fall. It matters not to me whether the bees get back to their own hives or not. There will be no fighting when first put out, and the bees will be in the apiary somewhere. If some colonies get more than their proper share of the bees this can be remedied six weeks or two months later, by simply exchanging strong colonies with weak ones. I find this the best way possible to equalize an apiary and make all colonies of nearly equal strength. If the exchange be made when the bees are flying freely, and bringing in honey, there will be no fighting nor no loss of queens. Try this plan by and by, as indicated, and satisfy yourself. When honey is as cheap as it is to-day, it won't pay to equalize the strength of an apiary by the slow-poke way of exchanging combs of brood. Truly yours,

Kane Co., Ill., March 11. M. M. BALDRIDGE.

The question as to the right time to take bees in the cellar, and the right time to take them out, is one of great interest to Northerners. Mr. Baldridge wants to get his bees in late and out early. A strong argument for that is the fact that in such case the time of confinement is shorter, and cold and long confinement are the two factors leading to diarrhea. Cold alone will not produce diarrhea. Confinement alone will, if the confinement be long enough. The more severe the cold the shorter the confinement they can bear. So if all other things are equal, the later the bees are taken into the cellar and the earlier they are taken out the better for the bees. The trouble is that other things are *not* always equal, and you don't know enough ahead to guess how other things will be.

Quite a number who cellar bees are now advocating taking them out earlier than has been generally considered advisable. So many are they, and men of such good repute, that I have been led to question whether I may not have been in error in keeping mine in so late as I have been in the habit of doing, so this year, as an experiment, I have taken out 20 colonies before the usual time. N. D. West, of New York, some of the Canadians, Mr. Baldridge, and others in his vicinity, are among the advocates of taking out early.

First, as to taking in. Mr. Baldridge lives less than 30 miles from me in a bee-line, and yet I suspect that the lay of the land is such that he has a somewhat milder place than I to winter bees. He says Nov. 20 gave him a fine flight-day at 66°. Only 2° less with me, and my bees also had a fine flight, and we both hustled them into the cellar immediately after. He says it would have been just as well to have left the bees out till about the first of December, or later. Then why didn't he leave them out later? I know that it would have been not only "just as well," but a good deal better, to have left them out till Dec. 9, for on that day, at 52°, they would have had a good flight. Why didn't I leave them out till that time? Just because we *didn't know* beforehand that they could have a flight as late as Dec. 9. Indeed, I drew a long breath of relief when they had the flight Nov. 20, for I was just a bit afraid they wouldn't have a flight again before spring. I have known such a thing as there being no flight after the first of November.

I am in entire accord with Mr. B. in wanting to put bees in *late*, if by that he means as late as possible and yet let them have a flight immediately before cellaring—that is, within a day or two. But it's always a matter of watching and guessing. When it begins to seem like settled weather I am always uneasy for fear it may stay cold, and I have a strong feeling that when cold weather sets in every day they are left out is as bad as five day's confinement in the cellar.

Suppose, then, they have a good flight Nov. 15. I know that they can stand the confinement from that time, and I don't know that they will have a chance for another flight. If Dec. 10 is a warm day then I've given them 25 days unnecessary confinement in the cellar, and they would be better without it. But suppose I wait for a flight Dec. 10, and it doesn't come—doesn't come till spring. Instead of 25 days in the cellar they've had 25 days out in the cold, which has filled their intestines very much more, and done them vastly more harm than if they had been in the cellar. So I'd rather do the smaller harm than take the risk of killing outright a number of colonies.

Now, as to taking out. I think I know just when is the best time to take bees into the cellar, *if* I could tell beforehand all about the weather, but I'm not so sure about the taking out, even if I had a full chart of the weather six months ahead. For years I've watcht a certain soft-maple tree for its first blooming. Not time to take out till it blooms, and try to judge then what the weather is likely to be. Sometimes it blooms, or at least partly blooms, and then comes a long, cold spell. Nothing so very definite, you see. Watch for the maple to bloom, then guess whether the maple knows what it's about. Something like weighing pork by putting it on one end of a plank across the fence, balancing with stones at the other end, then guessing at the weight of the stones.

March 8 Mr. Baldridge took out his bees, there being too much snow the day before. If I had put mine out March 8, it would have been in a snowbank. But I got 20 colonies out March 14. The question is whether those 20 will be better off or worse than the others which remain in the cellar till later. Will the cold weather after they've had their flight do them as much harm as the longer confinement in the cellar will do to the balance? I don't know. Possibly I can tell something about it after all are out, and possible not. I think I've never had any spring dwindling when bees were taken out late. I have had it when they were taken out early.

Last year Mr. Baldridge took out the last of February; I not till a month later. Mine did well, could hardly have done much better if taken out earlier, but then I can't be sure about it. In 1873 mine were taken out Feb. 22. Two survived out of 50! Do you wonder I'm shy of taking out early? But they were not strong. Sometimes I wonder whether there may not be quite a difference in locations, even tho not many miles apart. Possibly the difference in the shelter of an apiary may make a difference. It is also possible that very strong colonies are better out early, and weak ones not so early. But so long as mine do well when taken out late, I'll go rather slow about pushing them out in the cold till I've tried it first on a few. C. C. MILLER.

McHenry Co., Ill., March 15.

Suggestions on Rendering Beeswax.

BY C. P. DADANT.

It occurs to me that I might give some indications to many of our bee-keepers that would enable them to render their beeswax without that greenish, grayish, grainy residue so often found at the bottom of the cakes. I have heard no end of assertions made about this residue. One of our brightest bee-keepers assured me that it was propolis; another said it was grains of pollen, and that there was a great deal of pollen in all the beeswax that is produced. Gentlemen, it is all a mistake. It is beeswax badly rendered, mixt with impurities, of course, but spoilt by water. Smell it, taste, burn it, and you will make sure of this.

In the January Review, one of the contributors, speaking of beeswax spoilt by water, suggests that this is caused by some chemical change. It is *not* a chemical change, but simply a mechanical mixture. Take the white of an egg, which is a viscous, ropy, clammy, adhesive substance; beat it awhile with a fork, and its condition will change entirely. You will then have a light, white foam without adhesiveness or viscosity, yet there has not been any chemical change. The white of the egg is simply mixt with air and its capillary attraction is broken or lessened. Beeswax overheated and beaten by steam is in the same fix. Its tenacity is broken, its color is changed, and it may be made to contain as much water mixt with it, and yet not actually apparent, that it will lose 25 per cent. of its weight when returned to its proper condition. I once had a half barrel of cappings which had been neglected till midnight, and I tried to render these cappings by simply turning a steam-pipe into the barrel among the cappings. Not an ounce of this made good beeswax till I had remelted it with the sun extractor. Therefore, I strongly urge those who render beeswax to heat their wax slowly with water, of course, but boil it a little. You can boil beeswax till there is nothing left but this fine, grainy residue.

Some of our leading bee-keepers seem much occupied with the thought that beeswax when rendered is made more tough and less fit for foundation because of its becoming mixt with propolis. I believe there is nothing in this. Propolis is much softer than beeswax at a high temperature. You and I have all had our fingers soiled with it when handling the bees in warm weather, and if it was mixt with the beeswax in rendering, instead of making it tougher it would make it softer. But very little if any of the propolis mixes with the wax when it is properly rendered, and what does mix cannot injure it. There is much more danger to the wax from the water than from anything else, and the water only makes it brittle, and apparently rotten. I say "apparently," for I believe there is no such thing as actually rotten beeswax under any conditions.

Hancock Co., Ill.

⁂

The Bee-Space and Size of Hives.

BY W. S. DONER.

I have been reading the comments on the bee-space as a cause of poor wintering, but I must say I do not agree with those that condemn the bee-space as a bee-killer. If it is the bee-space, will Mr. Greiner please tell us if the bee-space was not in 8 and 10 frame Langstroth hives, as they are the poorest hives to keep bees in that I know of, for any one that is not an expert, as the bees, especially blacks, will put all the honey into the surplus department in the summer honey-flow, and if there is not a fall honey-flow along comes the farmer and takes all the honey, and leaves the bees to starve (or to be killed by the bee-space). The Langstroth shallow-frame system of forcing all the honey into the surplus apartment is too much like killing the hen to get the egg.

The farmer wants a hive with as much comb as a 12-frame Langstroth hive, and with frames not less than 12 inches deep, and some people that are bee-specialists, myself included. I would rather have 20 pounds of honey to a colony in the spring for results than to have the increase from 30 pounds fed to them. With me, the large hives give the best results for honey.

Some people will tell you that bees will not put as much honey over a frame 12 inches deep as over an 8 inch, but I have found that the deep, large hives have the strongest colonies, and the largest yields of honey. I have 8-frame dovetailed hives, and hives of my own construction that hold the equal of 12½ Langstroth frames, and they are in two sections, each 7¼ inches deep, and the hive for a colony I wish to winter is 16x16 square by 14½ deep. They are lock-jointed at the corners, and have Hoffman self-spacing frames. Colonies in the small or 8-frame Langstroth hives stored an average of about 60 pounds to the colony; and the large ones about 90 pounds of comb honey a colony. The large colony that put up the most has a record of 120 pounds of comb honey; and the best 8-frame colony, 80 pounds.

This county is covered with ex-bee-keepers whose bees have starved to death by being bled to death for the last drop of honey, as the bees need all the brood apartment in an 8-frame hive to rear brood, so up above goes the honey, and if the man has an extractor he has the key to the situation. He can practically take all the honey, and about four times out of five he does not know that he is leaving his bees to starve.

When properly managed (in a country that has a fall honey-flow, as this part of the country usually has), the 10-frame Langstroth hive is all right, but the 8-frame takes too much watching to suit me.

Give each colony of bees the equal of 10 Quinby frames, and about 40 to 60 pounds of good honey, and you need have no more fear of the bee-space than you would if they were in a box without any bee-space. Plenty of good honey for the colony, summer or winter, is better than money at interest—it is the bee's bank account, and will pay you every time.

The apiaries of 8-frame hives in times of prosperity would put one in mind of mushroom towns in western Kansas, which in time of adversity depart like the passing of a shadow. The large hives do not increase the apiary so fast, and it pays as it goes along. If the manufacturers of apiarian supplies would put out a hive suitable for the farmer, in a few years they would be able to sell more hives than they do at present, and it would put the bee-business into the hands of the farmer in a more "stayable" shape.

Pottawattamie Co., Iowa, Feb. 8.

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Every Present Subscriber of the Bee Journal should be an agent for it, and get all others possible to subscribe for it. See offers on page 206.

CONVENTION PROCEEDINGS

Report of the Wisconsin Convention.

BY N. E. FRANCE.

The Wisconsin State Bee-Keepers' Association met in Madison Feb. 2, 1898. As the Secretary and Treasurer were expected on the noon train, a motion was carried to have a social meeting until after dinner.

The convention was called to order at 1:30 p.m. by Pres. F. Wilcox. G. W. Wilson, of Readstown, exhibited a large piece of very thin beeswax, rendered by his solar extractor, which he described and is so easily handled.

FOUL BROOD INSPECTOR'S REPORT.

The State Inspector of apiaries for 1897, N. E. France, reported that as it was left to his judgment how best to apply the $500 appropriated by the Legislature to be used in suppressing foul brood, and finding that no transportation would be granted by the railroads, as requested by our State Association and recommended by the Governor, he decided that the first thing to do was to buy a quantity of Dr. Howard's books on the history and treatment of foul brood, and to distribute them among the Wisconsin bee-keepers as called for. In the forepart of the summer the inspector was called upon to visit various apiaries of diseased bees, and found in many places the colonies affected with dead brood, much resembling what Dr. Howard describes as pickled brood. In some places it was quite serious, and seemed to be contagious. In describing it the inspector said that this dead brood was mostly confined to brood either sealed over or about to be sealed; the larval bee was of dark color, head black, hard, and dried to a sharp point. The larva was easily drawn from the cell, and had a very tough skin from which, on being punctured, a clear fluid would run out as thin as water, and free from the smell so peculiar to real foul brood; in no case thus affected was there any indication of the ropiness found in foul brood.

In some parts of the State there was lack of fraternal love—the owners claiming that their bees were all right, but that their neighbors' bees were diseased, and he was requested to call on them and burn up their entire bee-keeping outfit. The inspector boarded with bee-keepers when possible, and had often secured the use of their teams free of charge, thereby saving the using of railroad mileage books, and lessening the total expense. He said that as other State officers were allowed transportation in the State while on State work, this office ought also to be entitled to it. The Governor had requested our State Association to present such a petition to him, which they did; he endorst it and sent it to the General Passenger Agent last May, but he refused to grant the request at that time.

At the close of the above report, a motion was made and carried that the Executive Board be a committee to take such steps as would be necessary to secure transportation of the State inspector of apiaries in Wisconsin.

A lengthy discussion of foul brood followed.

SHIPPING COMB HONEY—WHITE CLOVER SEED.

QUES.—"What is the best way to ship comb honey?" Pres. Wilcox thought in single cases with lath over the front glass, or in quantity lots of six or eight 24-pound cases, crated, with convenient handles.

Mr. France reported having seen white clover seed harvested in Washington and Dodge counties. It is easily saved, and is profitable work, one firm last season paying $74,000 for white clover seed from these two counties. In many parts of the State he examined large fields of clover fully as rich in seed, which had been allowed to go to waste.

Mr. Lathrop said that drone-larvæ are good chicken feed, and that if sections were well cleaned as soon as taken from the hive, there would be no danger of wax-moths.

J. Hoffman askt how to get the best results for comb honey. Pres. Wilcox replied that one should have abundant brood up to the honey-flow, then contract the brood-chamber and give supers as occasion demands.

INCREASING THE DEMAND FOR HONEY.

QUES.—"What shall we do to increase the demand for honey?" "Rev. Winter said, "Keep talking of the many uses of honey." H. Lathrop called attention to the great value of Dr. Miller's leaflets, and thought that bee-keepers should set the example by using it at home for domestic purposes. Pres. Wilcox spoke of having a printed sign, "Honey for Sale Here;" another advised bee-keepers not to crowd to large city commission houses, but sell direct to consumers. Mr. France spoke of having all honey in neat packages, with name and address of producer on each package; also to keep a book list of those sold to, so that at any time it can be referred to.

The question, "Will honey be affected by moisture after being taken from the bees?" was askt. Several replied from experience that it would gather moisture, and if stored in damp cellars either comb or extracted would be likely to sour.

Mr. Lathrop was appointed a committee of one to secure reduced freight rates on bees in less than car lots, and report at the next meeting.

SECOND DAY'S PROCEEDINGS.

The meeting was called to order by the President; the minutes of the previous meeting were read, and the Treasurer's report was given. It was decided that as the Association's expenses had been paid by Secretary France, all the funds now in the treasury should be turned over to him to pay all bills, and apply the balance upon shortage in legislative expenses.

QUES.—"Shall our Association make a State honey exhibit at the Omaha Exposition?" Mr. France said that he had attended the meeting of the Wisconsin Commission at Milwaukee, and as there was no State aid, and all money would have to be raised by subscriptions, he recommended that we make no honey exhibit, and that the supply dealers take such space as they desire at their own expense.

QUES.—"Should our State Association have semi-annual meetings?" ANS.—No.

AMALGAMATION OF THE TWO UNIONS.

QUES.—"Should the two Bee-Keepers' Unions be amalgamated?" This was answered by resolutions as follows:

Resolved, That the Wisconsin State Bee-Keepers' Association do hereby endorse the United States Bee-Keepers' Union, and recommend Wisconsin bee-keepers to send $1.00 to the General Manager, Hon. Eugene Secor, of Forest City, Iowa, for membership in said Union. Be it further

Resolved, That we will rejoice at the amalgamation of the two Unions under one management.

HONEY ADULTERATION—SWEET CLOVER.

The adulteration of honey in our markets was discust at length, and the new food law on adulterated honey was read by Mr. France.

The subject of sweet clover came up, with its great worth to bee-keepers as a honey-plant, and excellent stock pasture if kept cropt close. Mr. France called attention to the wrong idea of many bee-keepers as to their lawful rights, many having the idea now that they had no right to its free use in the highways, whereas, anything in the highway, be it trees, weeds, or anything that is obstructing or hindering in the highway, the authorities having a right to remove for the good of the road, but that this law applied to sweet clover no longer as being a noxious weed upon the farm; that a person has a right to raise it for his own use.

QUES.—"Is the quality of honey of any given plant affected by difference of soil or climate?" ANS.—Yes.

The election of officers resulted as follows: President, F. Wilcox; Vice-President, J. Hoffman; Secretary, N. E. France, of Platteville; Treasurer, H. Lathrop.

PREVENTING HONEY GRANULATION—FEEDING BEES, ETC.

The question arose as to how the granulation of honey could be prevented, the most satisfactory answer being to heat the honey, care being taken not to overheat and discolor it, and to use hot water in the outside vessel to prevent the honey from burning.

QUES.—"What is the best feeder for the fall feeding of bees?" ANS.—Mr. G. W. Wilson uses a 2-quart basin covered with floating screen; others preferred to save during the honey-flow some choicest full combs of best sealed honey, and when a colony needed feed to exchange for the empty combs in the hive.

QUES.—"What is the best direction to face the entrance of hives?" ANS.—If to east or south often in the spring the sun warms so as to induce the bees out when the weather is too cool; it is better to have shade-boards or double-walled hives.

QUES.—"What is the most convenient vehicle in the apiary?" ANS.—Daisy wheelbarrow. N. E. FRANCE, *Sec.*

Report of the Northwestern Bee-Keepers' Convention, Held in Chicago, Nov. 10 and 11, 1897.

REPORTED BY A SPECIAL BEE JOURNAL REPORTER.

(Continued from page 181.)

SECOND DAY—AFTERNOON SESSION.

In the absence of Dr. Miller for a short time, Mr. Whitcomb occupied the chair, and read the following question:

STING OF THE HONEY-BEE.

"Is the sting of the honey-bee poisonous?"

Mr. Whitcomb—No, I do not think that the sting is poisonous. It is the formic acid that is injected into the circulation that is poisonous. It is not only poisonous in the circulation, but in the stomach, and it is the most deadly poison known. That is one reason why honey makes some people sick. There are people all over the country that cannot take any honey. We have made some experiments on that lately, with people who had never previously been able to eat honey, giving them honey in which we knew there was no formic acid, and without a single exception they have reported that it failed to make them sick. This honey was taken off by the Porter-escape process. But by the old-fashioned robbing process, going to the hives and robbing the bees, the instinct of the bee is to save its honey, and in stinging small particles fall off on the honey, and that makes people sick.

Mr. Karch—My wife was stung right on the forehead. She said she was feeling very queer, that something pretty near like that happened to her some years before when she thought she was overcome by the heat—a sort of sun-stroke, and she said, "I feel just the same as I did that time we thought I was sun-struck." But this was no sun-stroke, it was a bee-sting. Another time she was stung on the wrist. It wasn't but a few minutes till she fainted away; it just went through her system, starting from where she was stung, and turned kind of purple, and she said she could taste it when it got to her mouth, a very disagreeable taste. She fainted away, and I thought she was dying, and sent for a physician as fast as I could, but not finding him at home, we did the best we could, and after awhile this fever past away, this heat, this hot wave, and she began to swell some, and turned pale and cold, with severe pain in the stomach, apparently about the same symptoms as poison would cause, and I thought she was going to die. We tried hot baths and warm applications, and she got over it. The next day the neighbor's wife told me, "I didn't say anything to you yesterday, but I thought your wife was about to die. We didn't expect her to live a half hour." I said, "You needn't have told me, that was what I expected."

Mr. Heffron—I saw in a French journal awhile ago that a man had been stung very largely, had 150 stings around his neck at one time; they were extracted afterwards, and the injurious effects were prevented by making a plaster of ipecacuanha powder. They just wet it up with water, and put it on around his neck, and it hardly swelled at all, and produced no injurious effects. I have used it this summer in perhaps a dozen cases. I havn't guarded myself very much against the sting of bees because I learnt I could prevent any evil effects. I took a little ipecacuanha powder and wet it and put it on the place, whether on my face or on the front or on the side of my neck, front or back, as I had been stung in all those places. It didn't swell at all, and I used to swell badly.

M. S. Miller—My father was stung on one of the main blood-vessels on the back of the hand. He described the feeling as if there had been a whole lot of ants starting from that point and crawling all over his body. It made him very sick, and in about a half hour he had to "throw up," probably in 20 minutes, and after that he began to get better. The doctor he had declared he could not have lived over half an hour if he had not done that.

Mr. Heffron—The stings of bees have been kept dried for six months, and then have the same effect that they would when fresh. So the poison is not something that is not necessarily connected with what little fluid there may be.

Mr. Karch—The doctor said of my wife that if it had not been for "throwing up," she would have been dead.

Mr. Smith—I would like to know if it makes any difference how the sting is removed.

Mr. Green—Decidedly. That is one of the principal things in preventing pain and swelling. One should not pinch it out, nor try to dig it out, but scrape it off as quickly as possible.

DO BEES HEAR?

Mr. Whitcomb—I wanted to ask one question: Do bees hear? If so, how?

Mr. M. S. Miller—Is it not a recognized fact in medical science that there is such a thing as transmitting sound to the sense commonly known as hearing outside of the ear, and if that is so with man, why not also with bees?

Mr. Whitcomb—Four or five years ago, while attending a farmer's institute, Prof. Bruner, of the Nebraska State University, made the assertion that bees had no ears and could not hear. Nobody over there cares to contradict Prof. Bruner very much, but I did "call him down" at once, and the Professor qualified it by saying that if they had any means of hearing he could not find it. Since then I have investigated the matter considerably. I am not a scientist, but nobody has ever handled bees for any length of time without being satisfied they could hear. There is the hum of fear and anger, and of satisfaction that seem to be understood by every bee in the colony at once. If I take a colony of bees in this room and make it dark, and scatter the frames here and there, the minute the hum of satisfaction has started up on the comb where the queen is, they will all leave the other frames and go to the queen, going across the floor. And the peculiar noise the queen makes, in case of starvation or of abject fear, seems to be understood entirely by the bees at once. On investigation I have come to this conclusion, that bees hear entirely through the nervous system, the nerves coming to the surface along the abdomen of the bees, and they operate the same as our ears, and they understand that way. The nervous system of the bee is very finely constructed. After a friendly controversy Prof. Bruner has agreed with this idea. I say they hear, and hear as distinctly as we can through our ears.

ALFALFA IN THE NORTHWEST.

Pres. Miller then resumed the chair, and read the following question:

"Will alfalfa stand the winter in the Northwest?"

Pres. Miller—There is a field of it about seven miles from me (northern Illinois) that has stood for several years.

Mr. Karch—Some of my neighbors have had it for years, and it seems to stand first-rate in that country.

Mr. Stone—I can't understand why it is that the University at Champaign, when they made a test of alfalfa, reported that it was a failure in Illinois, and that it was not a valuable plant in this State. I have a small patch of it myself, in the neighborhood of Springfield, and it has done very well. I am going to sow more of it. I know a man that has 20 acres of it, and he has cut it two or three times a year, and it is very fine. I have cut mine four times a year for two summers.

Pres. Miller—The general understanding is, it doesn't belong to this climate—won't do here; yet, if it is anything like as good a plant with us as it is elsewhere, it is worth the while of the bee-keepers to inquire into it.

Mr. Stone—I sowed last spring 20 acres of alfalfa with my Alsike, with oats, and on one side, finishing up, I sowed an acre of alfalfa.

Pres. Miller—Did you sow alfalfa with the oats or alone?

Mr. Stone—I sowed it after I sowed the oats. I always sow my oats and cultivate them in well, and then sow the alfalfa, and run over it with the drag or some light harrow. I sow clover seed that way, never sow it without covering it. When I went over it on the morning of the day I came here, I found a very fine stand in the stubble on most of it. For some cause it died out on one end, and I can't understand why, unless it was because the ground was too rich and too loose for it to take to the soil. The seed I have in my garden—a small patch, probably 10 square rods—I sowed about the time of sowing red clover, and it was up in about three or four days. Red clover sometimes lies for two or three weeks before you can see it is up. It is very tender, and I understand that everywhere they grow it they have to cut the first crop, cut the weeds to keep it from choking out the alfalfa, and after that you have no trouble. This year we have had one or two hogs penned up, and have cut alfalfa every day for them, and with half the corn that they would eat to keep them alive, they have thrived with that alfalfa till I never saw hogs in better condition than they, and they are just as greedy for it as anything else you could feed them.

Pres. Miller—Turn the hogs on it, or cut it, in summer?

Mr. Stone—Cut it.

Mr. Whitcomb—You can turn them on it. I brought perhaps the first stalk of alfalfa that was brought east of Salt Lake, in the spring of 1877. It is a very hardy plant after it is establisht. The ground, to sow alfalfa, should be prepared as carefully as though you were going to plant onions, in the richest land you have. The most successful growers of it in our State put it in with a plow. Then cover it in. Get it into the moist ground. It won't stand heavy frosts in the fall. The best alfalfa growers in our State do not put any crop in with it at all. They mow the weeds down. After it is establisht there is no trouble about a stand, where there is moisture within ten feet of the top. I had trouble last year because it was wet all through the spring of the year. This year it has done nicely, and we have harvested four crops. It is not only an excellent thing for feed while it is fresh, but stock eat it with a great relish in the hay. I once opened up some bales of alfalfa hay, and found it was more than half sweet clover. The stalks were so large in many cases that they had to double them over. I thought I was "sold," but when I came to feed it I found the stock went for the sweet clover first. It is an excellent plant. Instances are on record where the roots have been found 30 feet below the surface. But on a lime subsoil, where the lime is near the top, I would say it is not a good alfalfa country; but anywhere that you have water within ten feet of the top it will do. It is a little peculiar about harvesting. It should be raked up right after the mower, and allowed to cure in the shock, and then hauled in from there. I regard it as one of the best forage plants for all this northwest country. But it is very tender in the spring of the year. It cannot stand frosts, and it cannot stand too much wet in the spring. I sow 20 to 30 pounds to the acre, so that the alfalfa takes the place of weeds as quickly as possible.

Mr. Stone—Wouldn't it do to cut the hay down when there is no dew on it, and then put it up as soon as it is withered?

Mr. Whitcomb—I am afraid it would be a failure then. I did a little of that one year, and it all had to be taken out.

Mr. Stone—You are sure you didn't have any dew or moisture?

Mr. Whitcomb—I am not sure of that. I don't cure it in the windrow, but in the shock. It cures nicely there. Then haul it in. You will not lose the leaves that way, but if you allow it to dry on the surface of the ground there will be no leaves left. In Colorado we find hogs are raised and fattened alone on alfalfa, and they are good hogs, too. Of course, they are not corn-fed hogs. Nothing fattens hogs like corn. Horses can be carried through the winter without a bit of grain if you have plenty of alfalfa hay. There is but one thing that I regard better as forage, and that is sorghum.

Mr. Stone—There is only one thing I don't like about alfalfa—it doesn't produce much honey here with us, I believe. I never can find half a dozen bees on my whole patch at one time. It might be if we had more of it so the bees would go to work on it, it might be used, because I find millers and other insects working busily on it.

Mr. Whitcomb—I haven't been able to get any alfalfa honey at all. The nectar in the alfalfa doesn't seem to have any attraction for honey-bees, except where there is nothing else for them to work on. Alfalfa honey has no flavor or taste.

Mr. Baxter—One day last July a gentleman said, "Your bees are making a lot of honey." I said, "Not now." He replied, "My neighbor has a little patch of alfalfa, and they are just literally covered with bees." I never went there to examine, but it appears they must have been on it, or else he would not have told me so, because he is a man of honesty.

Mr. Stone—I would like to ask him if he is sure that the man was not mistaken. People with us get alfalfa and Alsike and sweet clover all mixt up, and don't know what they are talking about.

Mr. Baxter—If he were not an intelligent German, who had seen it growing in the old country, I might have believed that he didn't know. He said he had seen it growing, and was sure this was alfalfa. I would say that I have seen fields literally white with white clover, and not a bee on it. I have seen it when the bees were starving. I have seen the same with buckwheat. I have seen the same with heart's-ease. The trouble is we probably did not look at it at the right time. You may look at buckwheat about 10 or 11 o'clock and not find a bee, but from daylight until that time it was probably literally swarming with them. With other plants it depends a great deal on the season and atmospheric conditions.

ALSIKE CLOVER AS A HONEY-PLANT.

Mr. Karch—How is the Alsike for a honey-plant?

Pres. Miller—That is certainly one of the very best honey-plants.

Mr. Whitcomb—I agree with you there. I don't think we have anything better, and nothing better for hay.

Mr. Stone—I do not believe it ever fails to yield honey. I will just state what I learned at the World's Fair. A man there said he kept a dairy at Elgin, and that his cows produced more milk than any other dairy in the country. I askt him the cause, and he said that he ascribed it to his having Alsike clover for pasture. I askt him if his cows were not a better milking strain than his neighbors' were. He said no, that the same cows were now doing much better than before they had Alsike pasture. I then askt if he kept bees, to see if there was a motive behind it, and he said he did not. He said his neighbors' bees just swarmed on it. On a 10-acre strip of Alsike I cut a crop of hay, the second crop came up, and it was all headed out, and so was the red clover along the other part of the meadow; and every day when I would come to the field for my milk cows in the evening, they would always be on that Alsike clover, and they ate it down so closely, the cows and the sheep together, I was afraid they would kill it; and the red clover, to look across it, didn't appear to have been toucht.

(Concluded next week.)

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Tarred Paper in Honey-House Walls.

Will tarred paper used on the walls of a honey-house impart its tarry odor to the honey kept therein? I have just purchast some for that purpose. N. Mex.

Answer.—I think there has been some complaint in that direction, but if the paper is put on early this spring, it will probably not be troublesome by the time honey is stored in it. If any one has actual experience in the matter, will he please rise?

Putting Bees Out—Early Feeding.

My bees are alive yet. How soon had I better move them to the summer stands? Will it hurt to examine them now, and take out the straw above the brood and put in sections of honey in the super to feed them? Iowa.

Answer.—Unless you are very much afraid the bees will suffer for lack of stores, better not open up a hive till weather is warmer, say in fruit-bloom. Of course it is better to disturb them than to let them starve. But putting on a super to feed them makes a good bit of empty room for them to keep warm. On account of changing place and losing their bearings, the sooner the bees are put on their summer stands the better.

Transferring to New Combs and Hives.

I have five colonies of bees in box-hives. I wish to transfer in spring to movable-frame hives. Can I do away with all contents of the old hives after the bees are transferred in the new? My reasons are, I want to start my apiary with good, clean material, and I think the old combs may be so old as to be unfit for use. All five hives are as full of bees as they can hold, and have plenty stores left. So far they are doing nicely, and are gathering pollen every day that the sun shines, and it is not too cold. La.

Answer.—Yes. Perhaps the most economical way will be to wait till the bees swarm, then hive on full sheets of foundation, and three weeks later, when all worker-brood has emerged, drive out all bees and unite with the swarm, unless you want to increase.

Wagon-Rack for Hauling Bees.

Please describe the wagon-rack you use in hauling your bees to and from the out-apiary. Mich.

Answer.—My wagon-rack is quite a simple affair. A common farm-wagon box rests on heavy springs that are detachable, and I can't tell what the springs are called. It's a pair I borrowed from a fruit-dealer who hauls on it heavy loads of melons, etc., and all that's necessary is to raise up the wagon-box and set the spring on the bolster. The wagon-box itself is filled with hives, so the rack must be high enough to accommodate that. The width of the boards used for the sides and ends of the rack of course determines its height. For side pieces use boards long enough to project back farther than the end of the wagon-box, for you may as well have two or four hives on the rack back of the box. These side pieces sit edgewise on the sides of the wagon-box, a board of the same width being nailed on the front end, also at the back end, and for greater security one at the middle. Short boards 12x6 inches are nailed on the sides projecting down on the wagon-box, so there's no possibility of this frame-work slipping off. Strap or band-iron is nailed on at the joints where the end pieces are nailed to the sides, for fear the nails might work loose. Now boards six inches wide are nailed across the top to support the hives. These are long enough to take two hives, the hives standing back to back, but not near enough to touch, the entrances of the hives facing toward each side of the wagon. Nail the first board on the front end, and nail on the front edge of the board a strip ⅞ or an inch square to prevent the hive slipping forward. Now lay on loosely the second board about where you think it ought to be. Before putting on the second board, nail upon the middle of it, that is about 2½ inches from each edge, two strips about ⅞-inch square, these strips not meeting at the middle by perhaps six inches. Lay this second board loosely about where you think it ought to go, and then put on two empty hives. Push the board up to place, and that will show you just where you ought to nail it, only it would be too tight a fit, so have a little strip of ¼-inch to lay beside the hive so as to allow ¼-inch play. Now fasten the second board and go on with the third, and the rest in the same way, only the last board will have its strip at one side instead of the middle.

From end to end is now put on each side a strip perhaps an inch or more wide, and in the middle a board wide enough to keep the backs of the hives from touching. If you are to drive over a very rough road, it might be necessary to have the strips that hold the hives from sliding off, more than an inch thick.

The wagon-box I use holds nine eight-frame hives, and the rack 22, making 31 hives at a load. This is much less than some others haul at a load. It would be an easy matter to have made my load 42 instead of 31 by making the cross boards longer, so as to take three hives abreast instead of two.

Getting Increase—Alternating Shallow Brood-Chambers.

1. Which is the best way to increase, from one to about four colonies?

2. Will the bees rear brood extensively, alternating two six-inch deep brood-chambers once in ten days? Wis.

Answers.—1. Sometimes there is no "best," only a worst way, unless you want to do a lot of feeding. Even with feeding, it's a pretty hard matter to do much if honey doesn't yield. With a good season there ought not to be much trouble about it. As you can't tell for certain what the season will be, it's a good plan to keep on the safe side and work on the nucleus plan as described in the text books and in late numbers in this department.

2. It's a little doubtful whether you can gain anything by alternating. With a good strain of bees and a good queen, you're likely to have all the brood reared the bees can care for, if you give them combs enough. Breaking up their arrangements by alternating the two stories might in some cases induce more brood, but it might, as well, make less.

Out-Apiary Questions—Full Sheets of Starters in Sections—Number of Colonies in an Apiary.

1. What can I run an apiary of 35 colonies, spring count, for?

2. The bees are ½ mile from my apiary. Do you think I can run that yard and my own myself?

3. Are full sheets of foundation in the sections better than one-inch starters?

4. How many colonies do you think can be kept in one apiary in Virginia? Va.

Answers.—1. You can run them for extracted or comb, or for part of each, or you can run them entirely or partly for increase. The size of the apiary really makes very little difference about it.

2. If you have sufficient experience there ought to be no trouble about your running both apiaries yourself. If the out-apiary is only ½ mile away, however, it would be almost as well to have the bees all in the home apiary, and it would be a good deal more convenient.

3. I very much prefer full sheets.

4. If the location is an average one, probably from 75 to 100.

Figwort—Managing Sunday Swarming.

1. I would like to know something about Simpson honey-plant or figwort—how to grow it, what time to plant it, and what the seed costs. Does it kill out in winter? Do early frosts hurt it? Will it grow well on light, sandy soil?

2. What would be the best way to manage bees in swarming-time, so that the bee-keeper would not have to do anything with them on Sunday, and not lose any swarms? Mich.

Answers.—1. When the interest in figwort was at its height, I sent to another State and bought plants enough to set out about an acre, and had probably as nice a plantation of it as was ever seen. My advice to you, as a friend, is to let it entirely alone and not plant a seed of it. I don't believe it will pay you to fuss with it. If there is any one who had a plantation of it 10 years ago and has not given it up, I should be glad to hear of it. Not long ago the editor of Gleanings said he thought a plant of it might give as much honey as (I think it was) 10 of sweet clover. And yet he does not deny that they have given up growing it—a pretty strong proof that it isn't considered of profit enough to grow. Answering your questions, however, I should say your quickest way would be to set out the plants. If you could see one plant in blossom or seed you could then recognize it, and very likely you might find a good deal of it growing wild right about you. It seems rather inclined to grow in fence-corners and shady places when growing wild, and is not inclined to increase rapidly. In such positions it stands the winter well, but in the open ground is inclined to winter-kill, at least in this locality. I think it will not do so well in sandy as in stronger soil, but I may be mistaken about this. Now, if the experience of others is different, and they have found figwort worth cultivating, by all means let us hear from them, but let it be those who have had it under cultivation 10 years or more, as a great many, I think, started with it years ago.

2. One way is to have a queen-trap at the entrance, then take a look at the cage Monday morning.

Rearing Queens—Queenless Colonies.

1. How soon can queens be reared with safety of mating with drones?

2. I have two queenless colonies on top of other strong colonies with plenty of combs, honey and bees for each hive. What time should I set them off to themselves to rear them a new queen? Or would it be best to leave them where they are?

My bees have been bringing in pollen and honey on warm days for some time. Combs were ⅔ full of brood Feb. 19. MISS.

ANSWERS.—1. When you find drone-brood sealed, you may then begin to rear queens, so far as concerns drones being ready.

2. You don't say whether these colonies on top have communication with colonies below, or are entirely separate. If there is communication, probably they are by this time part and parcel of the colony below, and may be considered as all one colony. If separate and queenless they will not rear a queen, either where they are or anywhere else, without having young brood given them. If you want them to rear a queen by giving them brood, you can move them at once or leave them till the young queen lays.

A Non-Swarming Colony.

1. I have a colony of bees that have not swarmed for 8 years. I bought the queen from a breeder in Illinois. During these years they have not changed color, which is remarkable, as I am surrounded by black and hybrid bees. Can it be possible that the original queen is still in the hive?

2. I am anxious to introduce some of this stock into my other colonies. How should I go about it and not interfere with my honey crop? I have 50 colonies, all at this time in good condition. We have had a very open winter, very little snow, and just enough cold weather to let us fill our ice-houses. VA.

ANSWERS.—1. I haven't the slightest idea the same old queen is there. It's probably not so very often a queen lives half that time, altho there have been cases recorded where a queen was six years old.

2. Hard to tell just what may be the best way, so much may depend on circumstances. One way may be to have queen-cells ready, and when a colony swarms cut out all queen-cells in the old hive and give a cell of the choice stock. If you want to change the queens of the other colonies, you can do it toward the close of the honey harvest without interference.

Increase by Dividing—Dummies—10-Frame Hives—Changing from Blacks to Italians.

1. I wish to increase the number of colonies by dividing. They are in 8-frame dovetailed hives. Can I successfully make three out of one by supplying queens, and have them in good condition when clover bloom comes? How would you proceed? How without giving queens?

2. In using dummies, is it necessary to use chaff or plain board? Must the empty space be filled with them or not?

3. I am just a beginner and have only a few hives. I have thought of changing to 10-frame hives, as I think I would like them better. Do you think it advisable in my locality (Trumbull Co.)?

4. Would you advise me to change from black to Italian stock? My bees are a little mixt, and are hard to handle. They are good workers. Are the yellow as good? OHIO.

ANSWERS.—1. I'm afraid you're rather wild in your expectations. If I could each season make sure of making three colonies of each one, taking the entire season for it, without getting a drop of honey, I think I'd stop fooling with a honey crop and raise an annual crop of bees. Some years I might do it, but other years I couldn't. But I wouldn't dream of starting in the spring, the best season I ever knew, with 30 colonies, and have 90 colonies ready for the clover harvest. If I wanted to have the advantage of the clover crop, I wouldn't think of increase until the beginning of harvest at the earliest, and I'd study carefully all that's said in the text-books about increasing, and then take the plan that seemed best adapted to my circumstances. In any case, I'd keep most of my colonies, what might be called fairly strong colonies, all the time. By supplying queens, you would probably do well to follow the nucleus plan as lately mentioned and described in this department, and you could hasten matters considerably by furnishing queens, instead of waiting for the bees to rear their own.

2. Either one will do. It isn't necessary to have the space filled solid. For example, if you want to fill the space usually filled by two brood-combs, you can have a single dummy measuring 2½ inches through, or you can have two dummies an inch thick, or three dummies of ⅜-inch stuff, or a single one of these last will do if you're not afraid the bees will build in the space.

3. If you don't expect to give them very much attention, the 10-frames will be safer for winter, and possibly may be best in any case, but I think likely, if you give them closest attention, it may be better to have the 8-frame hives and use two stories, whenever needed.

4. You will probably find the Italians better workers, and gain by the change.

Transferring—Putting in Frames of Foundation.

1. I have two good colonies in box-hives. I would like to transfer them in the spring into new hives. I also would like to get one natural swarm from each. How can I best succeed? How would it do to put in full frames of foundation (say five) it being a 10-frame hive, then after the first swarm comes out place the new hive where the old one stood, place the old one in front of the new hive, make a bee-pass between each opening, of screen wire, then open a hole in the top of the old hive, smoke by spells, and compel them to vacate. After smoking down well, take old hive away. Would this plan work? If not, tell me why, and a way that is better.

2. I am putting in two full frames of brood-foundation for all my natural swarms this year. Should I put them in together, or put an empty frame between them?

3. I have a colony that has been in an old hive for a number of years. Last summer it cast two fine swarms in June. A month after it seemed that the old hive had nothing but drones. The first of August I killed most of them. What was the cause of so many drones? Did the drones come back from the young swarms cast, or was the queen dead? or was it the fault of the old comb in the old hive? I introduced a new queen, after which the bees seemed to feel better. Is there any use to molest the old comb in that hive this spring? The bees are in good condition now. IND.

ANSWERS.—1. Better leave the bees in the box-hives till they swarm, and hive the swarm in a frame hive. Set the swarm in place of the old hive, putting the old hive beside the swarm. A week after swarming set the old hive in a new place. Two weeks later transfer the old colony, at which time there will be no chance to injure any brood.

2. Perhaps it will be as well to put an empty one between.

3. It is possible that there is an unusual amount of drone comb in the hive. Possibly the colony was queenless, and a queenless colony will welcome all drones that may come from other colonies. If there was never trouble before or since as to a superabundance of drones, the comb is not likely to be at fault, and need not be disturbed.

Working for Both Comb and Extracted Honey.

I am thinking of running an out-yard the coming season, and would like to work it partly for comb honey. Do you think the following plan would be likely to work:

Work the colonies for extracted honey until they get well at work in the surplus, then place a super of sections filled with foundation under the extracting-super. Do you think it would be likely to cause swarming as much as it would if the sections were placed on at first? Would they be likely to complete the extracting-super before beginning the sections? Please tell what you think about this plan. NEW YORK.

ANSWER.—If you use full-sized combs in the extracting-super, unless there is a pretty heavy harvest, there would be danger that your super of sections would not be finisht in good time. With shallow extracting-combs the matter will be helpt. You probably would be troubled less with swarming than to put on the sections at the start with no extracting-combs. If the extracting-super is large and the colony not strong, or the harvest poor, the sections would be little workt, and vice versa.

The "Golden" Comb-Honey Management.

What is your opinion of Mr. Golden's method of producing comb honey? Do you think it superior in any degree to the ordinary method of treating a swarm and the colony it issues from? Should you approve of it, please say what you think of adopting the same tactics with colonies that do *not* swarm. Seems to me if it will do under one set of conditions, it ought to do under the other. Don't you think it would result in pollen in the sections? or is that which a friend tells me true, viz: That when the queen is confined the bees cease to carry in pollen; as, during her confinement, and unlike queens of our own species under like conditions, she is producing no progeny that would require feeding. SOUTH AFRICA.

ANSWER.—I have no experimental knowledge on the subject, and could hardly give an opinion that would be of value. But I may say that the popular notion that a colony with a caged queen carries in no pollen is somewhat out of the way. If you should see the many combs loaded down with pollen that I have seen in such cases, you would feel very sure that caging a queen does not stop the gathering of pollen, altho it lessens its consumption.

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

New Use for Honey-Leaflets.—That bright noter and picker of the Canadian Bee Journal, D. W. Heise, suggests that instead of the Canadian societies continuing bee-journals as premiums to members, they should furnish a supply of our honey-leaflets—"Honey as Food." Why not? They would help to make an outlet for the honey of the members—the very object desired.

◆

Some Original Ideas.—In the Southland Queen, Mr. Madley is reported as saying you don't need comb foundation to secure straight combs if your hives front south, but if they front north or east foundation must be given to prevent crooked combs. He "never saw a bee-tree that the bees went in on the north or east side." Rev. T. C. Thedford says bees measure cells when making them by the length of their legs. He forgot to say which legs. "Madford" and "Thedley" have truly "original ideas!"

◆

Plain Sections and Fences.—Editor E. R. Root, in Gleanings for March 15, replies as follows to the article which appeared on pages 114 and 115, on the no-bee-way or plain sections, and fences or cleated-slat separators:

> THAT BLIND EDITOR.—Some chap in the American Bee Journal, referring to my early disapproval and subsequent approval of the plain section, accuses me of being *blind* when I *want* to be blind, and of being able to see when I want to *see*. I take it that this is a polite insinuation that, when it is to the interest of our supply trade to recognize the merits of a good thing, I am loud in my praise of the thing in question: and that, when it is not to the interest of the supply business, then I am very *mum*. Naughty York, not to put on his name and *address!* I wish I could just catch that fellow without a name. I would show him that even *he* looks through a glass darkly, for it is very evident he fails to see that I have not been as naughty as he thinks. However, I will forgive him, for, tho not committing himself directly, he apparently thinks the plain section and fence a good thing.

We want to say that the "chap" Mr. Root refers to knew exactly what he was talking about when he made the accusations and insinuations that seem to have opened the eyes of a certain "blind editor." We wouldn't think of disclosing our contributor's name and address, for no telling what calamity might befall him should he ever cross Editor Root's pathway, even if the latter does say he'll "forgive him." That's all right. He may "forgive," but to forget—that's another matter.

◆

The California Bee-Keepers' Exchange.—We have received the following regarding the Exchange, from a Californian who knows whereof he speaks:

> "MR. EDITOR:—I notice that on page 152 you have an 'editorial comment' that is a trifle misleading in relation to the business of the Exchange. The best of our dealers estimate that the honey crop in this section of the State is about 200 carloads; the Exchange has handled about 25 car lots; therefore, instead of handling one-fourth of the crop, it is only one-eighth, which makes quite a difference.
>
> "The time to know how the Exchange is going to succeed is after the settlement for the year is made. If the bee-keepers have realized as much for the sales as they would to have sold to dealers, then there will be no cause for complaint. But if the net price falls short of that, then look out. The Exchange idea is all right, but the trouble just now is the lack of confidence in its workings.
>
> "We do not anticipate much of a honey crop this year, as the rains are few and light."

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The Pure Food and Drug Congress was held in Washington, D. C., March 2, as per announcement, and the United States Bee-Keepers' Union was represented by General Manager Eugene Secor and Rev. Emerson T. Abbott, as we have previously mentioned in these columns. In the Busy Bee for March, Mr. Abbott gives this report of the doings of the Congress:

THE PURE FOOD CONGRESS.

There was held in Washington, D. C., beginning March 2, one of the most important meetings ever convened on this continent. I refer to the National Pure Food and Drug Congress. It was called together by a local committee made up of public-spirited and enterprising gentlemen who live in and adjacent to the city of Washington. There was a general response to the call from all over the country, and representatives of the various industries interested were there from as far west as California, and as far east as Maine.

There were nearly 300 people in attendance, and almost every leading productive industry of the land was represented. The writer and General Manager Secor went as delegates to represent the United States Bee-Keepers' Union. As there was considerable expense attacht to such a long trip, I had some doubts at first about the propriety of sending delegates, but the moment I reacht Washington and saw the class of men there present, and the industries which were represented, all doubt was dispelled. One of the leading ideas of our Union is to "prevent the adulteration of honey," and more was done at Washington in co-operation with other industries in two days than we could do in years working alone. What we want and need is a National Pure Food Law covering every article of human consumption for either food or medicine, and we seem now to be in a fair way to get it, and the members of the United States Bee-Keepers' Union can feel that they have had a hand in the making of it.

Your delegates received the fullest recognition on the floor of the Congress, and bee-keeping at once took its place along by the side of other trades and industries, and was recognized as a part of the great movement for pure food and common honesty, which is sweeping over the country from Maine to California. Mr. Secor was placed on the Committee on Credentials, and the writer was made a member of the Committee on Permanent Organization, and was subsequently elected chairman. Later Mr. Secor was appointed a member of the Committee on Resolutions, and myself a member of the Legislative Committee of 25 to consider the "Brosius Bill," and report to the United States Congress. We were also made Vice-Presidents for our respective States. I do not mention these things to bring myself and Mr. Secor into prominence, but to let the bee-keepers know that our Union received full recognition by the other industries.

The Congress elected Mr. Blackburn, the present Food Commissioner of Ohio (and a gentleman of sterling worth and wide experience n pure-food legislation), its permanent President, and I take pride in saying that as a member of the Committee on Permanent Organization, I had a hand in presenting his name to the Congress. He proved to be the right man in the right place.

I have not the space to give a full account of the meeting, but will say that the unanimity of sentiment and feeling manifested by the representatives of the various industries of the country on the subject of pure food points to the fact that a powerful influence will be brought to bear on the Congress of the United States when the Bill comes before it, for its immediate passage. The reader can help to swell this influence by writing to his congressman and the members of the Senate, saying that their constituents ask that when the Bill recommended by the Pure Food Congress comes up for passage that they give it their hearty support.

This is not a political measure, but a movement in the interest of common honesty and the health and prosperity of the people, and all good men and women who believe in fair play can unite in urging its passage without regard to their political affiliations, or "previous condition of servitude," if you please. *Do it at once!* EMERSON TAYLOR ABBOTT.

We believe with Mr. Abbott that the United States Bee-Keepers' Union could not have done a wiser thing than to send its delegates to the National Pure Food and Drug Congress, just as it did do. It was a most notable gathering, and we understand not only from the foregoing, but from personal conversation with Messrs. Secor and Abbott, that they as representatives of the bee-keeping industry of this country were both honored and appreciated by the Pure Food Congress. We were glad that the New Union could have so large a hand in so important a matter. We trust that the Brosius Bill may soon be past by the United States Congress, and be speedily and rigidly enforced. Nothing else could possibly aid honey-producers so much as would the enactment and enforcement of such a law.

◆

Innovations in Printing.—The American Bee Journal has shockt some of the conservatives by its clipt and condenst spelling, but it is not alone in innovations. The Progressive Bee-Keeper eschews italics and substitutes capitals, giving an unusual look to the page. The Southland Queen and the Pacific Bee Journal think it is all right to shorten "all right" into "alright." Of course it's alright.

◆

Glueing Fence Separators.—Some one raised the question as to whether glued fences might not melt apart in the heat of the hive. Mr. T. T. Barrows, of New York, has this to say about that point:

"You need not be afraid to glue your fence separators, for if the glue is good they will stay. I have used them glued for 8 or 10 years, and they are as good to-day as when first made."

◆

The Colorado Convention meets April 13. Executive committee meeting the 12th.

A New Binder for holding a year's numbers of the American Bee Journal, we propose to mail, postpaid, to every subscriber who sends us 20 cents. It is called "The Wood Binder," is patented, and is an entirely new and very simple arrangement. Full printed directions accompany each Binder. Every reader should get it, and preserve the copies of the Bee Journal as fast as they are received. They are invaluable for reference, and at the low price of the Binder you can afford to get it yearly.

◆

☞ See "Bee-Keeper's Guide" offer on page 205.

THE WEEKLY BUDGET

FARM BEE-KEEPING is what Mr. Abbott will hereafter call his paper—the Busy Bee. Good change.

MR. ISRAEL OVERHOLT, of Ontario, Canada, wrote us March 21: "Bees have wintered well in this locality."

DR. C. C. MILLER, located in McHenry Co., Ill., writing us March 21, said:

"Finisht taking out bees to-day. Earliest for years. Earliest season for many years. Bees are in fine condition."

MR. C. A. BILLINGS, of Wayne Co., N. Y., wrote us March 15:

"My nine colonies wintered on the summer stands have come out in good condition—were out in good shape Sunday."

MR. E. P. RICHARDSON, of Salt Lake Co., Utah, when renewing his subscription recently, said:

"The Bee Journal is a good bee-paper, and worth several $ $ more a year than you ask for it. Lots of good information in each number."

MR. JOHN S. FRAKES, of Perry Co., Ind., tells how he appreciates the Bee Journal in the following words:

"I like the Bee Journal very much, and am anxious every Thursday evening to see it. I read everything it contains with great interest, and when a number fails to reach me I am disappointed. I could not well get along without it."

TOBACCO-DUST and A. I. Root. Whew, what a combination! Wouldn't have believed it if we hadn't seen it in Gleanings. But the tobacco-dust is not to be smoked or chewed, so don't get excited. It is simply a remedy for "almost all sorts of noxious insects," and also "an excellent fertilizer." We wish that all the tobacco grown could be turned into dust and used as mentioned, instead of much of it being used by people who seem to be anxious to die with "tobacco cancers," "tobacco hearts," or insanity caused by excessive smoking. Tobacco is a most excellent thing—*to keep out of your mouth.*

MR. P. E. SHEAR, of Ulster Co., N. Y., sent 50 cents on the Langstroth Monument Fund. We are inclined to think that before bee-keepers will be satisfied to let this matter rest, they will want to see at least $1,000 put into a monument to mark the resting-place of their beloved Langstroth. Why wouldn't it be a good plan for the large manufacturers of hives to contribute—oh, say about a couple hundred dollars each? Their prosperous business is practically the result of Langstroth's invention. And as bee-keepers are helping to support the manufacturers, indirectly it would be the bee-keepers' tribute to the memory of Langstroth.

SPELLING REFORM is coming. Gleanings is going to adopt it, too—sometime. Here is what Editor Root said recently: "But if even half of the printers and publishers would flop over, I guarantee you I could adapt myself to the change." That's a good deal like saying: When even half the people of this country have the backbone to vote out the saloon, why, I'll be with them. Or, suppose the great Wendell Phillips had said before 1861: "When even half the people are ready to strangle slavery, I'll be ready to help." Not much; but instead he all the time workt to hasten the coming of the day when the curse of human slavery should be no more on this continent. Say, Editor Root, why not you help lead off in some of the grand present-day reforms, as you have led off in many advances along the upward way of apiculture?

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

BIOGRAPHICAL NOTES.

F. J. R. DAVENPORT.

The Progressive Bee-Keeper has kindly loaned us the two engravings showing Mr. Davenport and his apiary in this number of the American Bee Journal. From that paper for November we take the following interesting notes concerning our Texas bee-keeping friend:

F. J. R. Davenport, the subject of this sketch, was born March 18, 1849, near Beaver Dam, in Ohio county, Ky., where he remained until he was about 26 years of age.

From his earliest youth he has been an admirer of bees and bee-hives, for his father, Robert Davenport, who was born in Ohio county, Ky., May 16, 1823, has always been an enthusiastic admirer of the busy little creatures. The old gentleman states that he dropt corn for 10 cents per day, when he was only 8 years of age, and earned enough money to purchase one colony of bees, and has never been without them since. He moved to Texas in 1873, where he still resides. In the '80's he owned and superintended three apiaries, consisting of more than 1,000 colonies. In 1883 he extracted 22,000 pounds of honey, and, by the way, he invented his own extracting machine, which answers every purpose that the patent extractors do.

F. J. R. Davenport.

From the above it is natural to suppose that the son inherited his enthusiasm for bees from his father.

In December, 1873, F. J. R. Davenport was married to Miss Josie Austin, daughter of Rev. James F. and Crinna Austin, of Cool Springs, Ky. In October, 1875, he moved with his family to Texas, and for 18 years has resided in Ellis county. His education is limited, and he states that while his advantages for an education were not very good, he was nevertheless favored with better opportunities than he improved. From childhood, as before stated, he admired bees, but his limited finances forbade him making any attempt at the business until 1886, when he purchast two colonies. For four years he accommodated himself with nail-kegs and rude boxes of his own construction, and such other things as were inexpensive and possibly convenient. In 1890 he secured his first patent hives, and from that time dates his bee-keeping on modern methods. He bought books, subscribed for bee-journals, and, as fortune favored him, he soon had all of his bees transferred to frame hives, and has been improving them ever since by introducing good queens of different varieties, principally Italians, Cyprians and Holy Lands. He has studied the nature and workings of bees, and, together with his experience, has acquired quite an efficient knowledge of them. He has acquired the art of queen-rearing, and in fact can do almost anything with them that any one else can. He manifests great interest in the bee-keepers' associations, and attends the conventions when possibly convenient. His apiary, consisting of 176 colonies, is in a shady hackberry grove, and presents an attractive scene.

Besides being an enthusiastic bee-keeper, Mr. Davenport is also a prosperous, energetic farmer. He owns a large farm of the best quality, black, waxy land, and has it well improved. He has two windmills with hydrant attachments, which convey the water to his house, garden and lots. He also has good stock, Jersey cattle, Berkshire and Poland China hogs, and even fine poultry, such as Brahma, Langshan and Brown Leghorn. To use the expression, "He lives at home, and boards at the same place." He has almost retired from farm work, as his bees require most of his time, but he superintends everything, and his four industrious boys execute his plans. By his industry and managerial qualities, together with the assistance of a noble companion, he has accumulated an estate valued at $10,000. He and his family are members of the Methodist church. He is of quite a jovial disposition, and his avoirdupois tips the beam at 210 pounds.

May he and his family enjoy many more years of health, prosperity and happiness.

BEEDOM BOILED DOWN.

Five-Sixteenths End-Bars are preferred by their largest customers, says Editor Leahy, so hereafter they will make them 5-16 instead of ¼ thick.—Progressive Bee-Keeper.

* * *

A Superstition in Oldenburg, Germany, is that no swarms will leave throughout the following season, and that all swarms will settle low, if bees are fed before sunrise on Holy Thursday.

* * *

Pop-Holes in Section Honey,—Editor Hutchinson thinks the whole secret of getting corners in sections all filled out without any pop-holes, lies in giving the bees free communication on all sides of the section.

* * *

Needs Much Salt.—D. W. Heise thinks that average of 250 pounds per colony from J. McArthur's bees, as reported in the British Bee Journal, should be taken with a little salt. The editor of the Canadian Bee Journal thinks it would better be all salt without the dose.

* * *

Laying First on Outside of Comb.—A Stray Straw in Gleanings mentioned that frequently, in enlarging the brood-nest, the queen first lays on the outer side of a new comb, and wondered why. G. M. Doolittle says it's because on the inner side of the comb the cells are largely filled with pollen.

* * *

The Composition of Honey, according to Dr. Oscar Haenle, is in general as follows: Dextrose (grape sugar, crystallizable) 42; Levulose (fruit sugar, uncrystallizable) 35; Saccharose (cane or beet sugar) 2; total sugar, 79 per cent. Water, 20; nitrogenous matter, 10; mineral matter, 0.2; phosphoric acid, 0.02.

* * *

Best Way to Ship Comb Honey.—This topic was discust at the South Texas Convention, and E. J. Atchley said, "Comb honey cans, with large screw-caps, is by far the best in this climate." Do they cut the honey out of the section before putting it in the can, or has the printer of the Southland Queen been taking liberties with the report?

* * *

Effect of Cold on Brood.—Editor Rauschenfels says nymphs, larvæ and eggs perish in about an hour if subjected to a freezing temperature. Brood subjected to a falling temperature ceases to eat at 41°, and falls into a lethargic state if the temperature continues to fall, which terminates in death if the temperature is not raised.

* * *

Better Get Standard Goods.—Fred S. Thorington is askt by a correspondent whether the correspondent better get dovetailed hives or some more like the ones he now has. Mr. Thorington says, "When goods are ordered, they should be of some standard patent." (Quite likely he said "pattern," and Leahy's devil "patented" the word.) He further says: "If hives and supplies are not in general use, that are ordered at the factory, there is always an extra charge for setting the machinery; so the standard, if not the best, is the cheapest." Besides, the probability is that standard goods have become standard generally just because they are the best.—Progressive Bee-Keeper.

Italian vs. Black Bees.—J. E. Crane started out an enthusiast for Italians, but in an experience of years found that in some cases blacks were ahead. In Review he says he believes that in localities where dark honey abounds, dark bees will beat, even if this is true for only part of the season, while in sections where clover and linden abounds with rarely much dark honey, Italians are the thing.

Preparing for a Dry Year. — Californians seem to be rather looking for a year of failure for lack of rain. J. James, in the Pacific Bee Journal, advises saving the expense of having to feed a big lot of bees by confining the queen on four frames by a division-board with a piece of excluder-zinc 4x6 inches. Then if the outlook is good next season, take away the division-board Feb. 1 and feed freely.

Wants Some Drones.—Hasty, the Reviewer, thinks the workers will not be satisfied without some drones, and it isn't best to cross them in this too sharply, if there's no drone-comb in brood-chamber the queen will lay in sections unless excluder or full sheets of foundation in sections are used, neither of which he wants to be forced to, so he wants in the two outside combs quite a bit more than Doolittle's 4 to 6 square inches.

Double Duty on Half Rations.—Editor Bennett, of the Pacific Bee Journal, seems to be starting out in good shape to meet the failure of the honey harvest, if failure it is. He eats only dinner and supper, no tea, coffee, sugar, pie or cake, plain food with lots of honey, doing twice the work on half he formerly ate. But Hasty is warned that a novelette will start in again. Takes an unfair advantage of Hasty by saying a lady will write it.

Numbers of Bees Rather than Colonies seem to be preferred by D. W. Heise (Canadian Bee Journal.) In his locality a man started with 35 weak colonies and got 900 pounds of surplus. Two miles from this man another started with 20 strong colonies and got 2,000 pounds—26 pounds per colony in one case, 100 in the other. Such a result might generally be expected, altho sometimes a distance of two miles makes a big difference in the harvest.

Bees Necessary for Growing Crops.—Albert Gale, in Agricultural Gazette, as quoted in Australian Bee-Bulletin, makes the vigorous assertion that if the native flora are wholly, or nearly wholly, cleared from the land to the extent of giving insufficient storage for the bees, so as to decimate them to the extent of their numerical inability to carry on the necessary work of fertilization, "the result will be more disastrous than drouths or floods, because our fruit trees, etc., would cease to yield their crops."

No-Bee-Way Section.—The South Texas Convention decided "that the said section was no improvement over the old section." The Southland queen is down on them hard. Doesn't like them—wouldn't like plain bedsteads without scallops—honey doesn't look so well in plain sections and won't sell as well—but wants to hear more about them. Is going to make something better than fence-separators—sawed wood-separators with perforations seven inches long. Evidently fences and plain sections don't suit that "locality."

Space Under Hives. — The question has been askt whether the bees are not hindered about getting to the combs by having a hive raised. Doolittle says, in Progressive Bee-Keeper, that this can make no difference, for the cluster comes down to the bottom. That swarming is overcome by raising the hive was proved a myth years ago, when there was plenty of swarming with all hives raised. After having tried that and various other bottom-boards, however, he strongly favors the Dr. Miller bottom-board with a shallow side for summer, and the other side, two inches deep, for winter.

Controlling Swarming at Out-Yards.—The editor of Gleanings says the question of preventing swarming in out-yards run for comb honey is a poser, but he tells how he managed last year, having few swarms, altho some honey went into extracting-combs. All queens were clipt, or entrances covered with queen-traps. Toward the swarming season he put on a second story with one or two frames of brood from below, filling up with empty combs or frames of foundation. After the upper story was pretty well filled with brood or honey, in some cases he put a super of sections on top of the whole, while in other cases he took off the upper story and put two section supers in its place, crowding all the brood possible into the lower story, and reserving the frames of honey for winter stores or extracting.

Paint for Hives.—R. C. Aikin says he has tried paint of all colors, and a hive painted *straight black* was the worst he ever had for swarming. Has had many dark red, and thinks they get too hot and cause swarming. Prefers light shades. Doolittle thinks hives should stand in shade from 8:30 to 4:30 o'clock, in which case color will make no difference. But he thinks bees do much the best in hives not painted at all, if the hives have single walls. If there's any *good* reason for paint other than looks, he has never seen it advanced. He wouldn't let any one paint his single-walled hives for $1.00 each. It would lose him $2.00 in honey, because it would hinder early breeding.—Progressive Bee-Keeping.

Thinks Hasty Has Fears.—Dr. Miller having said in Gleanings that when a new queen was given to a cross colony there seemed to be a change in the temper of the bees, so soon, that it must have been the presence of the queen that made the difference, and Hasty having commented thereon in Review, the Progressive Bee-Keeper's Somnambulist thus comments on Hasty's comments:

"One more fragment that I espied along the way was this, from that Bachelor Hasty, or hasty Bachelor, of the Review:

"'May it not be that all bees, immediately after re-queening, haul in their horns a bit, and feel as if home were hardly worth fighting for?'

"Now, where did he get that notion? No question of its originality; and if *that's* the way *he feels*, small wonder there's no queen to his establishment."

W. L. Coggshall's Bee-Keeping.—E. R. Root, in Gleanings, tells something of a visit to this man, who, he says, "runs over 1,000 colonies." (A wicked friend suggests that they can hardly be his own bees, or he wouldn't stir them all up by running over them.) Rapidity of manipulation seems to be the order of the day, and stings! A hand-cart holding four extracting-supers with an empty super on it is taken to a hive, hive-cover removed, quilt lifted a little way, smoke blown under, quilt flopt up and down sucking the smoke down into the hive; when ⅔ the bees have gone down the first frame is lifted from super, shaken in front of hive, and if any bees are left on the comb, a sweep or two of Coggshall's broom removes them, then the remaining frames are shaken into the super. When the super is emptied it is not pried off the hive, but jerkt or kickt off, making the bees mad, of course, but they take the stings and save the time. Then a second, third and fourth hive is visited, and the load taken to the extractor. The editor, while looking on, kept poking his hands deeper into his pockets, and the stings kept going deeper in his clothes, but the men workt away as if it was an every-day matter to work in a cloud of stings.

Two Bad Men—Too Bad.—"So shines a good deed in a naughty world," runs the quotation, but that very shining makes the shiner a conspicuous target for the evil-minded. Just because this Boiler shows such startling *originality* in the items given in this department, thus giving to the world ideas that otherwise never would have been born, D. W. Heise, of the Canadian Bee Journal, and Hasty, of the Bee-Keepers' Review—a man that has to eat 12 ounces of honey a day to keep him sweet—with fiendish malignity sorely wound the tender feelings of the Boiler. The Kanuck gets mad and calls names because some choice morsel he was gloating over is scoopt and brought to light in a weekly, some two or three weeks ahead of its intended advent in a monthly. But say, Heise, what's a body to do when he's overloaded with original ideas? Would you have him hold on to them and "bust his biler?"

Instead of standing off at an admiring distance, Hasty has the audacity to come close up and measure his own little height, saying he is "getting jealous." Yet he seems to have sense enough left to fear he will be accused of egotism, as he expresses it, "for even putting my [his] head up that high." The idea of such a man as Hasty, who can never clearly express what he has to say, and whose style is so dull that it must be a second-hand affair that some one has thrown away, comparing his prosy platitudes with the brilliant scintillations of this deponent! Perish the thought!

Sweet ❖ Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)	.60	$1.00	$2.25	$4.00
Alsike Clover	.70	1.25	3.00	5.75
White Clover	.80	1.40	3.00	5.00
Alfalfa Clover	.60	1.00	2.25	4.00
Crimson Clover	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

GEORGE W. YORK & Co.
CHICAGO, ILL.

Southern Home of the Honey-Bee

Is now ready for your orders for QUEENS of either **3 or 5 Banded Italians and Steel Gray Carniolans.** More than 300 Tested Queens to begin with. Untested, either race, 75 cts. each; June and until October 50 cents each. Tested $1.00 each. Good Breeders, $2 each. Straight 5-Banded or "Faultless" Queens, $5.00 each. Satisfaction guaranteed.

GEO. W. HUFSTEDLER,
Successor to Hufstedler Bros.,
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Muth's HONEY-EXTRACTOR Square Glass Jars.

Root's Goods at Root's Prices.

BEE-KEEPERS' SUPPLIES in general, etc. etc. Send for our new catalog.
Practical Hints" will be mailed for 10c. in stamps. Apply to—

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OUR PRICES are worth looking at. We are making the new

Champion Chaff-Hive

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—BEE-BOOK

That covers the whole Apicultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keeper's Guide.

Liberal Discounts to the Trade.

PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y.

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BEE-KEEPERS! Let me send you my 64-page Catalog for 1898.
J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing.

GENERAL ITEMS

Favorable Weather for Bees.

Plums and peaches are in bloom. The weather is very favorable for the bees.

JOHN M. RYAN.
Marshall Co., Ala., March 19.

Did Nothing Last Year.

Bees did nothing here last year. I had to feed to keep them through the winter.

C. R. GARDNER.
King Co., Wash., March 16.

Had a Good Flight.

My bees have wintered well so far. I have 34 colonies, and they all had a good flight the other day. JNO. HERBERT.
Kane Co., Ill., Feb. 12.

Severe Winter for Bees.

Our bees have had quite a hard time here, as the winter so far was exceptionally severe, with no rain to speak of. If rain will not set in soon and plentiful, we are sure to go through another season worse than last. P. A. SIOLI.
Sonoma Co., Calif., Jan. 31.

Had to Feed for Winter.

Last year I got a fraction over 50 pounds of honey per colony, but I had to feed for winter about 70 pounds of sugar, without cooking. This I did the latter part of October and the first of November. The bees are doing well on it. I have 15 colonies.

A. J. MILEY.
Rockbridge Co., Va., Feb. 14.

An Old Subscriber.

Having the "Old Reliable" from No. 1, Vol. I, to the present, I have not yet found the place to say "stop," and probably will not while I am able to bear the hum of the busy bees. I have 16 volumes bound, and probably would have had more bound volumes had not Mr. Newman given one volumes in "blanket form."

Warren Co., Pa. W. J. DAVIS, 1ST.

Foul Brood Treatment in England.

In my report of Mr. Cowan's address before the California Bee-Keepers' Association, publisht on page 85, the idea might be conveyed that the bee-keeper in England, in treating foul brood, resorted in all cases to extermination. The discussion at the meeting had a tendency to that effect, and the error might have crept in from that source. To place the matter right, I will quote from the "British Bee-Keepers' Guide," the English method of treatment:

"If the colony is weak, destruction of bees, combs, frames and quilts, together with thorough disinfection of hives, is far the best course to pursue. We thus destroy the spores and remove the source of infection. If, on the contrary, the colony be strong in bees the latter may be preserved by making an artificial swarm of them. They are then confined in a straw skep and fed on syrup medicated with napthol beta. The frames, combs, and quilts, must be burned, and the hives disinfected by being either steamed or scrubbed with boiling water and soap; then painted over with a solution of carbolic acid (one part of Calvert's No. 5 to two parts of water); when the smell has disappeared the solution is ready for use. The bees are kept confined to the skep for 48 hours, by which time all honey they may have taken with them will have been consumed, and such of the bees as are diseased will have died off. Those remaining are shaken from the skep into a clean frame hive furnisht with six frames

DR. PEIRO,
CENTRAL MUSIC HALL, CHICAGO.

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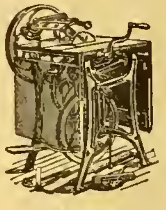
COMB FOUNDATION Wholesale and Retail.

Working Wax into Foundation for CASH **A Specialty.**

Hives, Sections, and a full line of Supplies. The **best** of everything. Write for Catalog, with prices, and samples of Foundation and Sections.

BEESWAX always wanted for cash or trade.

GUS DITTMER,
AUGUSTA, WIS.



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Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing, Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery. Sold on Trial. Catalogue Free.

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Basswood Honey FOR SALE

We have a limited number of barrels of **very best Basswood** Extracted Honey, weighing NET about 280 lbs. which we are offering at 6 cents per lb. f. o. b. Chicago. Do you want a barrel or so of it? If so, address, with the cash,

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READY TO MAIL

My 40-page Catalog of my Specialties, and **Root's Goods at their prices.** I carry a full line of BEE-KEEPERS' SUPPLIES, and can ship promptly. Catalog Free.

GEO. E. HILTON, Fremont, Mich.

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Our 1898 Mammoth Poultry Guide of 100 pages mailed FREE. Something entirely new, tells all about poultry, how to be a winner, how to MAKE BIG MONEY. Contains beautiful lithograph plate of fowls in their natural colors. Send 15 cts. for postage. **JOHN BAUSCHER, Jr.** Box 94 FREEPORT, ILL.

44A26t Please mention the Bee Journal.

QUEENS Untested, after April 1, $1; Tested $1.50; Select Tested, $2. Imported queens, direct from Italy, $5 each. The best of stock, either Golden or Leather Colored. Write for price-list. HUFFINE & DAVIS,
11A4t Ooltewah, Tenn.

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Catalog Free **A. I. Root & Co's Goods** for Missouri and other points, to be had at factory prices from **John Nebel & Son, High Hill, Missouri.** 9Atf

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Cash PAID FOR Beeswax

For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 26 cents per pound, CASH. No commission. Now if you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

GEO. W. YORK & CO.
118 Michigan st., CHICAGO, ILL.

fitted with full sheets of comb foundation, and are fed with medicated syrup a few days longer. The skep used as their temporary home must then be burned. All such work as is here described, should be done in the evening, when the bees have ceast flying for the day, to avoid chance of robbing."

Recipe for napthol beta solution: "Napthol beta was introduced after exhaustive experiments by Dr. Loret, and subsequent experience here has proved its efficacy. To make the solution proceed as follows:

"For convenience of measuring, procure from a chemist an 8-ounce bottle, markt with 16 divisions of half an ounce. Thus each division will be equal to one tablespoonful. Put an ounce napthol beta into the bottle and half fill with pure methylated spirit. Shake until the crytals are dissolved. Then add spirit until the liquid reaches the 14th line on the bottle. The solution is then ready for use. Each division will contain one tablespoonful, which is just the right quantity for 10 pounds of sugar. The solution should be stirred into the syrup while the latter is hot."

Los Angeles Co., Calif. J. H. MARTIN.

Favorable Winter for Bees.

The winter has been favorable for bees. As the fall honey was "nixy" on account of severe drouth, bees went into winter under unfavorable conditions, no young bees having been reared to anount to anything.

The Bee Journal meets my approval. I always read the editorial page first.

Cass Co., Mo., Feb. 17. W. D. HURT.

Report for 1897.

My report for the year 1897 is 7,000 pounds of comb honey of good quality from 60 colonies, spring count, increast to 100. December 10 I put 50 colonies into the cellar, leaving 10 on the summer stands. I had to move my bees out Feb. 10, as they commenced to spot the hive inside. I have had bees eight years. I always put them in a row and cover them with straw, so it is dark for them. C. W. ANDERSON.

Bureau Co., Ill., Feb. 15.

Honey Crop Prospect Fine.

The prospect now is fine for a honey crop. The bees are at work on the peach and plum bloom, turnips, mustard, etc.

I could get along, I think, without the Bee Journal, now that I know a little about bee-keeping, but it would be like the Irishman who had a coat made, and when he went for it, he found the sleeves sowed to the pocket-holes. The maker askt him "if it would do." "Yes," replied the Irishman, "but it's a poor do." I could do without the Bee Journal, but it would be "a poor do." M. V. ESTES.

DeKalb Co., Ga., March 19.

Mild Winter—Wintering Well.

We here in northeastern Pennsylvania have had a very mild winter so far, only a little snow, and about two weeks of real cold weather. Last week my bees were flying strong every day. There are 65 colonies all on the summer stands, and every one alive yet. I expect to move my entire apiary sometime between now and April 1, about ½ mile to a No. 1 place for bees, a southeast slope where the morning sun strikes them better. We have lots of young white clover yet, and the prospects are good for another crop this year.

PAUL WHITEHEAD.

Luzerne Co., Pa., Feb. 15.

New York State Association.

In pursuance of a call issued by a committee from several bee-keepers' societies, asking that delegates be sent to Geneva, N. Y., March 16, to organize a State bee-keepers' asociantion, the representatives from the different local societies met and decided to organize a society to be called "The New

TREE PLANTING
may be a way to wealth or a waste of money—depends on the kind of trees. All trees, plants, vines, from the Reid Nurseries are No. 1 stock, true to name. You gain by buying now. Prices were never so low. Write for illustrated catalogue, suggestions, estimates. Try **Star Strawberry, Eldorado Blackberry** for profit.
REID'S NURSERIES, Bridgeport, Ohio.

Listen! Take my Advice and Buy
Your Bee-Supplies
of August Weiss!
FINE FOUNDATION AND TONS OF IT. Working Wax into Foundation a Specialty.
I DEFY competition in Foundation
Millions of Sections—Polisht on both Sides!!
SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalogue and be your own judge. Wax wanted at 26 cents cash, or 28 cents in trade, delivered to me.
AUGUST WEISS, Hortonville, Wisconsin.

LEAHY M'F'G CO. INDEFATIGABLE HIGGINSVILLE, MISSOURI.
Ho, for Omaha!
As we have many customers in the Northwest, and believing they will appreciate the low freight rates obtained by purchasing goods from a railroad center nearer to them than we are, getting a direct through-freight rate, thus cutting the freight in half, we have establisht a branch house at 1730 South 13th St., Omaha, Neb., where we will keep a complete line of all Apiarian Supplies, the same as we do at Higginsville, Mo. With the quality of our goods, we believe most bee-keepers in the West are already acquainted, but to those who are not, we will say that our goods are par excellent. Polisht, snowy-white Sections, beautiful straw-colored transparent Foundation, improved Smokers and Honey Extractors, and all other first-class goods, are what we sell. Kind and courteous treatment and honorable dealing our motto. On these bases, we solicit an order, feeling sure that if we sell you one bill of goods you will be our customer in the future.
☞ PROGRESSIVE BEE-KEEPER, 50c per year. "Amateur Bee-Keeper," 25c. Both for 65c., postpaid. Sample copy of the PROGRESSIVE free, and a beautiful Catalog for the asking.
Address, Leahy Manufacturing Company, **Higginsville, Mo.,** or **1730 South 13th St., Omaha, Neb.**

GOLDEN BEAUTIES...
Three-band Italian Queens reared from Root's stock. Golden Queens, from the best selected stock, Untested, 50 cents; Tested, 75 cents. Carniolan Queens at same price.
E. Y. TERRAL & CO., Cameron, Texas.
12Atf Mention the American Bee Journal.

BEES! Florida Italian QUEENS!
Tested Queens, $1.00 each; Untested, 50c. 2-Frame Nucleus of Bees with good Queen $2. Prompt and satisfactory dealing.
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Bee-Hives, Sections, Shipping-Cases—everything used by bee-keepers. Orders filled promptly. Send for catalog. MINNESOTA BEE-KEEPERS' SUPPLY MFG. CO., Nicollet Island, Minneapolis, Minn.

BEES, HONEY, MONEY
Queens for Business.
Supplies at Bottom Prices.
"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.
J. P. H. BROWN, Augusta, Ga.
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FREE FOR A MONTH.
If you are interested in sheep in any way you cannot afford to be without the best and only weekly sheep paper published in the United States.
WOOL MARKETS AND SHEEP ☘ ☘ ☘
has a hobby which is the sheep breeder and his industry, first foremost and all the time. Are you interested? Write to-day.
Wool Markets & Sheep, - - Chicago.
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The Bee-Keeper's Guide
This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.
A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published today. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."
Given For 2 New Subscribers.
The following offer is made to PRESENT subscribers only, and no premium is also given to the two new subscribers—simply the Bee Journal for one year:
Send us **Two New Subscribers** to the Bee Journal (with $2.00), and we will mail YOU a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both together for only $1.75. But surely anybody can get only 2 new subscribers to the Bee Journal for a year, and thus get the book as a premium. Let everybody try for it. Will you have one?
GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

York State Association of Bee-Keepers' Societies."

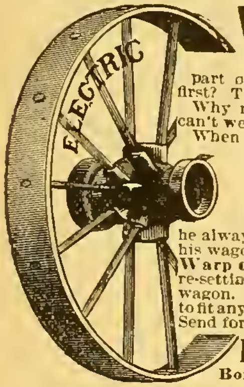
The following officers were elected for the ensuing year: W. F. Marks, President; F. S. Emns, Vice-President; and H. S. Howe, Secretary-Treasurer.

The next meeting will be held at Geneva, N. Y., the second Wednesday in January, 1899.

The active members are to be delegates from the county societtes,' but any bee-keeper will be made welcome at the meetings. HARRY S. HOWE, *Sec-Treas.*

Utah.—The Utah State Bee-Keepers' Association will hold its semi-annual convention in the City and County Building, Salt Lake City, April 5, 1898, at 10 a m. A full program in the interest of the industry will be presented. It is very desirable to have all parts of the State represented. Among other things to be considered is the transportation and marketing of our products, and also the adoption of the best plan to represent our State at the Trans-Mississippi Exposition, and to get our new foul brood law into active operation. Every bee-keeper should be interested in these matters. All are cordially invited. In case there may be any that cannot attend, we would be pleased to have their address, and have them send in questions on general topics. Several members of the Association have desired us to again call the attention of our bee-keepers to the Langstroth monument fund. Any who feel able should throw in their mite to mark the last resting-place of this the greatest of all American bee-keepers. No one will feel as if it was labor in vain, who takes a fraternal interest in this desirable object.

JOHN B. FAGG Sec., East Mill Creek. Utah.
E. S. LOVESY, Pres., Salt Lake City, Utah.



WHAT part of a wagon wears out first? The wheels, of course. Why not buy wheels that can't wear out?

When a man buys the

ELECTRIC WHEELS

he always has good wheels on his wagon. **They can't Rot, Warp or become Loose;** no re-setting of tires; they fit any wagon. We also make wheels to fit anything wearing wheels Send for circulars and prices.

Electric Wheel Co.
Box 16 Quincy, Ills.

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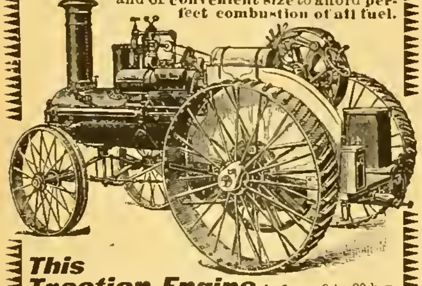
RUMELY ENGINES

Supply the maximum of power at the minimum of cost

for fuel, time, attention and repairs. The fire box is surrounded with water, hence they are quick steamers. The fire box is so constructed and of convenient size to afford perfect combustion of all fuel.



This Traction Engine is from 8 to 20 h.p.

Has Perfect Traction, Is a Good Puller, Fast Traveler, Easy Steamer, Long Liver,—

More about it and our Portable, Semi-Portable, Simple and Compound Engines, Threshers, Horse Powers, Saw Mills, etc., in our new catalogue. It's

FREE—Send for it.

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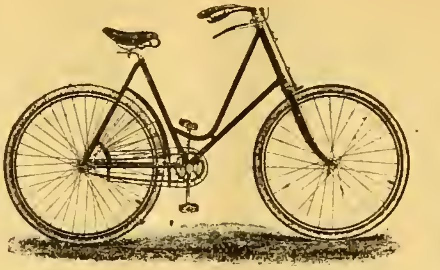

A Good Bicycle Free

Now, then, young men and young ladies, also boys and girls, take advantage of this offer and get a Wheel (**A THOROUGHLY GOOD ONE**) with a little work. To increase our circulation we have made arrangements with a first-class concern in this city to furnish us with their well-known

ALAMO WHEELS

at a price which enables us to give one **FREE** as a premium for sending us **50 New Subscriptions** to the Bee Journal at $1.00 each. You can send them in as taken, and when your list of 50 is complete, we will ship your beautiful wheel, *freight paid*, to your nearest depot. This wheel retails in the ordinary way at $50.00—and it concerns nobody but ourselves how we managed to get in on the inside cut price. For *40 Subscriptions* we will ship a Juvenile of the same make. Below we give *specifications:*

Frame—Shelby Seamless Tubing. 1⅛ Main Frame. Connections—Steel (selected.) Fork Crown—Oval (drop forged.) Handle Bars—Steel or wood, drop or upturn; cork grips. Wheels—28 inch. Pedals—rat trap. Rims—best elm. Tires—Morgan & Wright or Vim. Spokes—selected piano wire. Bearings—Tool steel (turned by experts.) Gear—64 to 80. Saddle—leather (rubber or felt neck.) Weight—23 to 25 pounds. Color—black, maroon, nicely striped. Special color by arrangement. Furnishings—Tool bag oiler, wrench, air pump, etc.

Ladies' model built on same lines with the usual difference between sexes, such as rubber pedals, etc.

Address,

GEORGE W. YORK & CO., 118 Michigan St., CHICAGO, ILL.

☞ **If you prefer to buy for cash, send us $35 for the wheel.**

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EVERY BEE-KEEPER

......**To have a copy of**......

Our 1898 Catalog

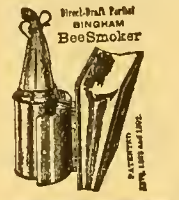
☞ Send us your name and address and we will take pleasure in mailing you a copy

G. B. LEWIS CO., WATERTOWN, WIS.

Special Agent for the Southwest—

E. T. ABBOTT, St. Joseph, Mo.

Mr. Abbott sells our Hives and Sections at factory prices.



Bingham & Hetherington Uncapping-Knife.

PRICES OF BINGHAM PERFECT

Bee-Smokers and Honey-Knives!

Smoke Engine (largest smoker made)	4-in. stove.	Doz.	$13.00;	each, by mail,	$1.50
Doctor	3½ in. stove.	Doz.	9.00;	"	1.10
Conqueror	3-in. stove.	Doz.	6.50;	"	1.00
Large	2½-in. stove.	Doz.	5.00;	"	.90
Plain	2-in. stove.	Doz.	4.75;	"	.70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz.	4.50;	"	.60
Honey-Knife		Doz.	6.00;	"	.80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4 inch Smoke Engine too large.
January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

Mr. Bingham. Dear Sir:—Please send per mail a 4-inch Smoke Engine. I have one of your Smokers; it is too small in time of trouble.
February 21, 1898. A. F. SEWARD, Riverside, Calif.

9A9t **T. F. BINGHAM, Farwell, Michigan.**

Page & Lyon Mfg. Co. New London,
——Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

Please mention the American Bee Journal. 7Atf

Two Special Offers.

As explained in former ads., publishers can afford to put forth extra efforts in securing *new* subscribers; as the majority remain, once they become subscribers to a *good* journal. It is from this point of view that I make the following offers:

Offer No. 1.

To any one not a subscriber to the Review who will send me $3.00. I will send the Review for 1898 and 1,000 strictly firstclass, snow-white one-piece Sections. After accepting this offer if any one wishes to buy more sections, I will furnish them at the following prices: 1,000, $2.75; 2,000 for $5.25; 3,000 for $7.50; 5,000 for $12 00. Sections will be shipt from any of the following points: Flint, Mich.; Chicago, Ill.; Medina, O.; Jamestown, N.Y.; Higginsville, Mo., or Omaha, Neb.

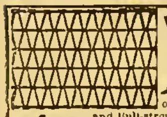
Offer No. 2.

To any one not a subscriber to the Review who will send me $1.50, I will send the Review one year and a fine, TESTED Italian Queen. Purchasers may have either the bright, golden strain, or the dark leather-colored reared from imported mothers. After accepting this offer, if any one wishes more queens, they will be furnisht at the following prices: Single queen, 90 cts.; 3 for $2.65; 6 for $5.00; 12 or more at 75c each. Orders will be filled in rotation, and safe arrival guaranteed.

Unless otherwise ordered subscriptions will begin with the January issue; and the December, 1897, number will also be sent, free.

If you are not acquainted with the Review, and wish to see it before subscribing, send 10 cents for three late but different issues, and the 10 cents may apply on any subscription sent in during 1898. W. Z. HUTCHINSON.

FLINT, MICH.



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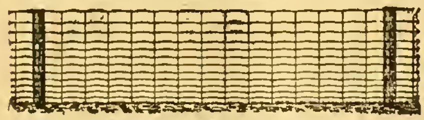
Excelsior Incubator and Brooder Cheap .....

200 eggs capacity. Good as new. Used for only two hatches. Everything complete. Will sell it for **TWENTY DOLLARS**, half the cost price. Address, **P. W. DUNNE,**
River Forest, Cook Co., Ill.



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every spring is needless. No "top rails" to lay up, nor need to chase down the lane after every storm if **Page Fence** is used. Send for "spring styles" and prices. See our ad. in next issue.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Texas Queens

Best honey-gathering strain in America. Tested, $1.50. Untested, $1.00. Write for a Circular. **J. D. GIVENS, Lisbon, Tex.**

7A26t Please mention the Bee Journal.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Mar. 23.—Very little demand for honey in the comb, the season being about over for its sale in any quantity beyond a case or so at a time, many retailers refusing to carry it in stock owing to sales being infrequent. Prices askt are 10c for best grade of white, 8@9c for No. 1 or fair grade of white; ambers, 7@8c; dark, same. Extracted, 5@6c white; amber, 4@5c; and 4c for dark and buckwheat. Beeswax, 27c.

R. A. BURNETT & CO.

Detroit, March 22.—Fancy white is lower and now quoted at 11c. No. 1, 9@10c; fancy dark, 7@8c; No. 1 dark, 6@7c. Extracted, white, 5@6c; dark, 4@5c. Beeswax in good demand at 26@27c.

There is considerable dark and undesirable honey on commission now, and some of it will be carried over to another season.

M. H. HUNT.

Kansas City, March 21.—Fancy white 1 lbs., 9@10c; No. 1, white, 9c; amber, 8@9c. Extracted, white, 5@5½c; amber, 4@4½c; dark, 4c. Beeswax, 20@22c.

Supply of comb honey is large; demand fair.

C. C. CLEMONS & CO.

Minneapolis, Mar 18.—Honey much more encouraging. Fancy white clover comb is selling here now at 10½@11½c. Not advisable to ship darker than amber. Extracted fancy white clover, 5½@6c; amber, 5c; dark, 4@4½c.

Outlook for honey much more encouraging.

S. H. HALL & CO.

Cincinnati, Mar. 21.—Demand fair for extracted, with insufficient supplies. Prices range from 4@6c, according to quality. Demand for comb is slow at 10@13c for best white. Beeswax in good demand at 20@25c for good to choice yellow.

CHAS. F. MUTH & SON.

Indianapolis, March 24.—Fancy white, 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand. WALTER S. POUDER.

San Francisco, Mar. 16.—White comb, 8@9½c; amber 5@6c; extracted, white, 4½@5c; light amber, 4¾@4½c. Beeswax, 24@27c

The firm tone last noted as prevailing in the market for extracted honey continues to be experienced, with light stocks of all grades. The same condition is reported as existing in the East and in Europe. Comb honey is still in more than ample supply for current requirements, having to depend wholly on local customs.

Milwaukee, March 8.—Fancy, 11 to 12c.; A No 1, 10 to 11c.; No. 1, 10 to 10½c.; No. 2, 9 to 10c.; amber and dark, 7 to 8c. Extracted, in barrels, kegs and cans, white, 5 to 6c.; dark, 4½ to 5c. Beeswax, 25 to 27c.

We are able to report an improved demand for fancy honey during the past few days, while the medium grades have also sold better, yet the surest sale is on the BEST. The supply continues equal to the demand, but the fancy grades are not in as good supply as the low and medium, which goes to prove that the fancy sells best—and the values better

A. V. BISHOP & CO.

Buffalo, March 11.—There is a good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

New York, Feb. 9.—There has been a fair demand for comb honey of late, and we are gradually reducing our stock. Fancy white is scarce and finding ready sale at 10 to 11c.; off grades white and amber, 8 to 9c.; mixt and buckwheat, 6c. Extracted is in fair demand—California white, 5½c; light amber, 5c.; white clover and basswood, 4¾ to 5c.; buckwheat, 4c.; Southern, 50c. a gallon. Beeswax is steady at 26 to 27c.

Cleveland, Feb. 22.—Fancy white, 12 to 13c.; No. 1, 11 to 12c.; No. 1 amber, 9 to 10c. Extracted, white, 6 to 6½c.; amber, 4 to 5c. Beeswax, 22 to 25c.

A. B. WILLIAMS & CO.

St. Louis, Feb. 9.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

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$100

Given as Bounties to purchasers of the improved Danz. Hives and Sections See schedule in my bee-book "Facts About Bees." Tells how to produce honey that sells for the most money. Free for 2c in stamps. Address

THE A. I. ROOT CO., Medina, Ohio,
or F. DANZENBAKER, Box 466, Washington, D. C.

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POULTRY PAPER, illus'd, 20 pages, 25 cts. per year. 4 months trial 10 cts. *Sample Free.* 64-page practical poultry book free to yearly subscribers. Book alone 10 cts. **Catalogue** of poultry books free. *Poultry Advocate*, Syracuse, N.Y

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Tested Queens in April and May, $1.00. Untested, 75c. Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

F. A. CROWELL,

8Atf GRANGER, MINN.

"WATCH POUDER'S AD"

SEE THAT WINK!

Bee-Supplies! ROOT'S GOODS at Root's Prices.

Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Catalogue free. **Walter S. Pouder,**
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INDIANAPOLIS, INDIANA.

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TAKE THE BIG FOUR!

Prize-Winning Golden Italian Queens.
Best Seed Corn in Ohio.
Seed Potatoes at living prices.
Choice Plymouth Rock Eggs.

Catalogue Free.
J. F. MICHAEL, Greenville, Ohio.

11Dtf Please mention the Bee Journal.

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EXCELSIOR

HATCH Chickens BY STEAM—With the MODEL EXCELSIOR Incubator

Simple, Perfect, Self-Regulating. Thousands in successful operation. **Lowest priced first-class Hatcher made.**

GEO. H. STAHL,
114 to 122 S. 6th St. Quincy, Ill.

Circulars free. Send 6c. for Illus. Catalogue.

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BEE-KEEPERS' SUPPLIES! Largest and Best equipt Factory in the **SOUTH-WEST.**

Send for Catalog.

FRED A. DALTON,

1A26t WALKER, Vernon Co., Mo.

C. B. BANKSTON

Is Rearing Queens in Cameron Texas,

And requests bee-keepers in the United States to write him with an order for a **GOLDEN QUEEN**—Untested, 50c; Tested, 75c. We breed the 3 and 5-banded Italians, and Silver Gray Carniolans.

Safe Arrival Guaranteed.

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It is always Pure and Sweet.
It is the kind that does not sag.
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If you once try it you will have no other. Samples furnisht **FREE.** Large illustrated Catalog of all kinds of

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Who is prepared to ship you, on short notice, **anything** in the apiarian line.

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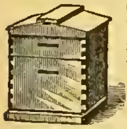
CARLOADS——



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We want the name and address of every Bee-Keeper in **America.** We supply Dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment.

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The A. I. Root Co.'s Goods **Wholesale. Retail.**

Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**
Cash for Beeswax. BELL BRANCH, MICH.

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I ARISE

TO SAY to the readers of the BEE JOURNAL that **DOOLITTLE** has concluded to sell —BEES and QUEENS— in their season, during 1898, at the following prices :

One Colony of Italians on 9 Gallup frames, in light shipping-box	$6 00
Five Colonies.....	25 00
Ten Colonies......	45 00
1 untested queen.	1 00
6 " queens	5 50
12 " "	10 00
1 tested Queen...	$1 50
3 " Queens.	3 50
1 select tested queen	2 00
3 " " Queens	4 00
Select tested queen, previous season's rearing..	3 00
Extra Selected for breeding, THE VERY BEST..	5 00

About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

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☞ Circular free, giving full particulars regarding the Bees and each class of Queens.

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21st Year **Dadant's Foundation.** 21st Year

Why Does It Sell So Well ?

Because it has always given better satisfaction than any other.
Because **IN 21 YEARS** there have not been any complaints, but thousands of compliments.

We Guarantee Satisfaction.

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☞ Send Name for Our Catalog, Samples of Foundation and Veil Material. We sell the best VEILS, cotton or silk.

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LANGSTROTH ON THE HONEY-BEE, Revised.
The Classic in Bee-Culture—Price, $1.25, by mail.

CHAS. DADANT & SON,
Please mention the Am. Bee Journal. **HAMILTON, Hancock Co., ILL.**

OUR MOTTO—" Well Manufactured Stock ! Quick Shipments ! "

SECTIONS, SHIPPING-CASES,
—AND—
BEE-KEEPERS' SUPPLIES.

We make a specialty of making the very best Sections on the market. The **BASSWOOD** in this part of Wisconsin is acknowledged by all to be the best for making **the One-Piece Honey-Sections**—selected, young, and thrifty timber is used.

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Please mention the American Bee Journal when writing.

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On 1896 Style Hives.

In order to make room for stock of New Goods at our Chicago Branch, we offer the following list of 1896 Hives at these reduced prices to close out quick :

		5	10	20
15 No. 3E	8-frame	$5.00	$9.00	$17.00
40 No. 1	"	5.00	9.00	17.00
15 No. 1E, P. W.	"	4.00	7.00	13.00
75 No. 1, "	"	5.00	9.00	17.00
55 No. 5E	"	5.00	9.00	17.00
25 No. 5	"	6.00	11.00	21.00
15 No. 6E	"	4.00	7.00	13.00
20 No. 6	"	5.00	9.00	17.00
30 No. 5E	10-fr.	5.50	10.00	19.00
30 No. 5	"	6.50	12.00	23.00

25 Townsend Section-Presses........50 cts. each.
13 Wakeman & Crocker Section-Presses........$1.00 "

Note.—The 1896 No. 5 Hives include a honey-board as well as foundation starters, and the No. 5E have these omitted. The No. 6 have the D section-case arrangement, complete with sections and starters; and the No. 6E the same, without the sections and starters.

Better order at once if you want any of the above list. All are bargains, for they are exactly as well made in every way as our later hives. Address,

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118 Michigan Street, **CHICAGO, ILL.**

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38th Year. CHICAGO, ILL., APRIL 7, 1898. No. 14.

CONTRIBUTED ARTICLES

An Uncapping-Box and Apiary Apron.

BY MRS. EFFIE BROWN.

Hitherto I have never ventured far out into the fields of bee-literature, for, somehow, there are so many able and experienced hands there that, when I do find out something which I think is good, just as I get all ready to publish the facts somebody is sure he knew all about it years ago.

Last summer I made myself an uncapping-box, and this spring I am making some apiary aprons which I am going to describe without trying to find out how many other bee-keepers already have just such articles.

My uncapping-box first came from the grocer—only a common soap-box, but by taking from and adding to it became a very handy thing to have in extracting-time.

The first thing I did with it was to clean it, and then wax it well so that it would not leak where I did not want it to. Then I turned it over and sawed off a strip of the bottom about three inches wide and the whole width of the box. Over this, inside of the box, I tackt a double thickness of common window-screen through which the honey could drain free from cappings. When I had the screen tackt on, I turned the box bottom upward and nailed a top-bar of a frame across the edge of the bottom I had just sawed; then another across the bottom of the end of the box, from which I had just knockt the strip. These two strips, when nailed, were about two inches apart, and each being nearly an inch wide, I nailed a piece of half-inch stuff (four inches wide and five inches longer than the width of the box) down solidly onto the two pieces of frame just nailed on. I then had a trough under the screen, and projecting far enough away from the box to run the honey into a pail.

A narrow strip on the back end of the trough, and one on each side of the projecting end, was all that was needed except the legs.

Now, I can't tell you much about the legs, only that they were made of good, stout strips of wood, with no two of the same length. But, anyway, after I had them nailed on, the corner from which the honey was to drip was the lowest. The whole box stands tipt slightly cornerwise, with the end of the trough high enough to set a pail under.

When I am going to extract I tack a narrow strip across the top of the box to rest the frames on, and then shave away. The cappings fall into the box, and the honey seeks the lowest corner where it passes through the screen down into the pail. The box should be large enough to hold all the cappings of one day's extracting. If allowed to drain all night they will be about dry in the morning.

After the box is completed it should have another coat of wax so that all the cracks will be well filled.

Mr. Paul Whitebread and His Apiary, in Luzerne County, Pennsylvania.—See page 217.

I know some of you men who read this will smile at this description, but I don't care much if you do. I made the box all myself, and if it isn't a thing of beauty I am sure it will be a joy for a long time.

And now about my aprons. There isn't much to be said about them which is commendable, except the pockets, and they are, I am sure, superior to any man's pocket, for I can carry my dishcloth in them if I want to. That's more than a man can do with his pocket, especially if he uses tobacco! [Oh, no, Mrs. Brown. Unless you mean the dishcloth would be the sufferer. Surely, a dishcloth is far cleaner than any tobacco we ever saw.—EDITOR.]

I used a common butcher's apron for a pattern, and cut a slit in each side to put the pockets in. These were made of good oilcloth, and when sewed up each was 8 inches wide and 10 inches deep. I did not set them on the outside, but put them in like a trouser's pocket. May be you think you would not like to carry a wet dishcloth in your pocket, but I do. I take a nice new one that never has washt any dishes yet, and wet it, then wring it out and put into my pocket. When working extracting I often feel quite "stuck up," and if I happen to be out among the bees in the hot sun, the damp "dishcloth" becomes very acceptable.

The only other things I need in my pockets are a screwdriver and a cheap jack-knife. If these do get wet and rust they are not a great loss. If the pockets become sticky, I turn them inside out, and wipe them off. The aprons should be made of good dark cloth, and soakt more than rubbed in washing.

And now if the men cannot understand the uncapping-box, I hope they will tell the women about the apron.

Eau Claire Co., Wis.

Cabbage Palmetto Honey—Buckwheat Bloom.

BY O. O. POPPLETON.

On page 749 of the Bee Journal for 1897, Mr. Harris asks me some questions about proper handling of cabbage palmetto honey when it shows fermentation under the cappings. I have never had the trouble Mr. Harris speaks of with that kind of honey, but have twice seen the trouble with a very dark, strong grade of honey that was gathered in May. This honey was full of air-bubbles under the cappings, and, after being extracted a little while, it had to be handled very carefully or it would blow bungs out of barrels, etc. I have seen it so bad that it was impossible to get more than a half gallon of honey in a gallon jug, without its foaming so as to run out of jug and waste. It makes no difference with this kind whether it is extracted before or after being sealed. The fault seems to be inherent with this kind of honey, and not because of lack of ripening. I know of no method of handling this honey that will correct the trouble, unless it might be by use of the sun evaporator. Mr. Mitchell and Mr. Hart (of Volusia Co., Fla.) have both had much experience with evaporators, and I presume have had enough of this kind of honey to test their value in such cases.

No, I don't think that extracting before being sealed over will remedy this evil. Handling honey in deep cans as I described, is an advantage with all kinds of honey, and should always be practiced, but that is not thorough enough to entirely cure the evil when honey is bad enough to ferment under the cappings. Fortunately, that kind of honey is not very common. I have had to contend with it only twice, and not in large quantities then.

BUCKWHEAT BLOOM—BEES WORKING NEAR HOME.

On page 743 (1897) Mr. Hutchinson is quoted as follows:

"Forty acres of buckwheat were once sowed early in the season, three miles from my little apiary......It bloomed two or three weeks before any other buckwheat, and my bees workt upon it and secured a little more than enough for their immediate needs, but when the buckwheat bloomed near home, the combs filled up with a rush."

This was said as proof that bees do not work profitably except near home, but it proves nothing, owing to a peculiar habit of buckwheat bloom. I never knew extra-early-blooming buckwheat to yield any quantity of honey, altho bees seem to work on it the same as they do after the yield sets in. This was probably the real reason for the facts Mr. H. quotes.

CYPRESS LUMBER FOR HIVES.

On page 745 (1897) the question is askt whether cypress lumber can be used for bee-hives. Yes, I prefer cypress to any other kind of lumber I have ever used.

BROOD-REARING IN WINTER.

On page 70 Mr. Doolittle says that "Quinby was correct in saying that brood-rearing would commence in all good colonies about Christmas, but that means in colonies wintered outside." For some reason or other my bees in Iowa didn't follow this rule. Fully nine-tenths of my colonies, as a rule, would commence brood-rearing between March 15 and April 5. The only reason for this difference that I can think of is that mine being in chaff hives may have caused the bees to act differently.

MOVING BEES FROM ONE LOCATION TO ANOTHER.

On page 134 the point is brought out in discussion that bees that are removed from one location to another in the spring will usually do better work than will those colonies not moved. I noticed this fact when first beginning bee-keeping, nearly 30 years ago, and repeated observations since then have confirmed me in my opinion that such is a fact. I am not able to give any theory why it is so—I can simply say that all my experiences in moving bees seem to uphold that opinion.

PACKING FOR WINTERING BEES.

On page 139, in answering a question about packing bees for wintering, Dr. Miller says: "Dry leaves are well liked, but sawdust is considered too heavy." He is correct, but my experience taught me that very fine chaff—that from timothy—is best of all; and next to that, I liked, not common sawdust, but such as is made by very fine saws while working in dry pine—such, in fact, as our bee-hive factories make in large quantities. I think this will be found better than planer-shavings. But beware of coarse sawdust, that isn't thoroughly dry. This last is probably what Dr. M. referred to.

Dade Co., Fla.

What to Do With Queenless Colonies in Spring.

BY G. M. DOOLITTLE.

A correspondent wishes me to tell in the American Bee Journal what to do with queeenless colonies in the spring. He writes as follows:

"I find, on this the first flight of my bees, that I have several queenless colonies. What had I better do with them? If it is best to unite them, what is the best method of doing it?"

What to do with these queenless colonies will depend upon two things—first, the wants of the correspondent, and, second, the condition of the queenless colonies. If the colonies are strong in bees, and the correspondent wishes more colonies than he already has, then I should give them a frame of brood from some colony having the same which it can spare, and send South for a queen for them, or let them rear a queen for themselves, just as my means would allow. The colony will become self-sustaining sooner if a queen is procured for them than they will by rearing their own queen; for most likely the first lot of cells built will have to be destroyed on account of not having drones in the apiary thus early. To rear a queen before there are any drones for her to meet, often proves a vexatious thing, as an unfertile queen is hard to find in order to be rid of her; and if not fertilized she will prove to be a drone-layer, or worse than useless.

If the colonies are to rear their own queens, brood must be given them once a week till they have a laying queen, which makes extra work; still, if anxious for bees, this work is not to be shunned, for such colonies with their young queens often prove among the best for honey during the season.

If the colonies are weak, or the owner does not desire increase, the best thing to do is to unite these queenless colonies with those having queens. To do this uniting, I would employ one of two plans at this time of year, and, as far as possible, unite the queenless colonies with the weaker ones having queens.

The first plan I would use is this: Select a time just after the bees have had a flight and become quiet, if the weather is cool, or wait till near evening if the weather is warm, and then carry the colony having the queen to the stand of the queenless one, and shake the bees from the latter off their combs and from their hive in front of the hive having the queen now on their own stand. Previous to shaking the queenless bees off their combs, blow some smoke in at the entrance of the one having the queen, till they set up a loud humming, which shows that the guards are conquered, when the hum will be interrupted as a call by the queenless bees, which will run in immediately, and no fighting will result. After dark take the now united colony to the stand formerly occupied by the one having the queen, and remove the hive and all pertaining to it from where the queenless colony stood, and no bees of any amount will return to be lost.

The other plan is this, and often works nearly or quite as well as the first: Crowd the bees having the queen upon as few combs as possible with a division-board, having a half-inch hole near the center of the same. Having previously taken the most of the combs away from the queenless colony preparatory to uniting, set the remaining combs with the adhering bees in the space on the opposite side of the division-board, closing the hive. Have the entrance open only on the side occupied with the colony having the queen, and the bees will unite of their own accord in a short time, as they will open up communication through the hole in the division-board soon after the queenless bees are placed in the hive. Use the same precaution about removing the hive, stand, etc., from the situation occupied by the queenless colony, and the work is done. Onondaga Co., N. Y.

⁂

Rich Bee-Keepers and Poor Alfalfa—A Reply.

BY W. A. H. GILSTRAP.

I find the following editorial paragraph on page 104:

"'If the production of honey is as profitable as some claim it to be, why do nearly all who own bees remain in moderate circumstances?' But there's the fun, Mr. Gilstrap. Besides, can you name a business in which fewer men have gone into bankruptcy?"

Yes, sir, I think so. So far as my information goes, peanut peddlers, tamalla peddlers, and boot-blacks, are examples. Many more might be given. Many banks, ranches, railroads, and stores are past on by bankrupt courts, a few apiaries also, but a boot-black's kit, never!

The article in the January Pacific Bee Journal which you comment on, applies better to this coast than to my native State (Illinois). We run more bees than you, possibly make a bigger pow-wow over it; while you get about as good an average yield, and make more money than we do.

Our climate admits of more winter work of varied nature. It is an unusual occurrence here to have a plow idle till noon because the ground is frozen too much to plow. In our coldest winters plowing can be done from daylight till dark most of the time, thereby enabling the farmer to plow 300 to 600 acres with one team in a season, seeding it to grain with a seeder which is fastened to his plow. Even more might be done. Some grain-raisers in this county are reported as making $3,000, or even $5,000, last year. One man can superintend several hands and do a "big business."

One man can manage 40 to 640 acres of ochard or vineyard, or 10,000 sheep. Henry Miller has control of over 13,000,000 acres of land, much of it well improved, besides many stores, hotels, irrigating ditches, slaughter-houses, etc. I don't believe he could successfully manage 3,000 colonies of bees.

Chickens, horses, hogs and mules might be mentioned, but it would be of no use to introduce more witnesses. If we manage to get 100 pounds per colony from 300 colonies, we are told we are doing well. If this honey sells for 2½ to 3¼ cents per pound from 7 to 40 miles from place of production, we feel that it is no wonder that no one accumulates much filthy lucre, while representatives of all occupations that are more prone to bankruptcy get rich.

Just how much hard cash our best bee-keeper has made in the last three years I do not know, but, candidly, I believe Wisconsin, Illinois or New York offers better inducements than California. If Mr. G. M. Doolittle can get 80 or 100 pounds of comb honey on an average, and sell at the New York price, he would better stay there—if he is not afraid of freezing. Dr. Miller can make more money where he is than here, much as I would like him for a neighbor.

ALFALFA FOR HAY AND HONEY.

Prof. Cook's remarks on alfalfa (page 97) do not apply to central California entirely. It is generally regarded as making a heavier crop of more nutritious hay if cut after full bloom is reacht. Bee-keepers should not discourage this plan. If left too long it is woody, and not relisht by horses. When alfalfa is left for seed it is generally better for honey than any other way.

In the driest season of the last five my bees stored about 20 or 25 pounds per colony, while the next driest year they reacht 140 pounds average—my best run. Alfalfa is my main honey source.

This season promises to be *very* dry, altho spring rains may help us greatly. Fresno Co., Calif., Feb. 23.

SUCCESSFUL WINTERING.

Three Essential Elements Necessary to Winter Bees Successfully in House-Apiaries by the Use of Artificial Heat.

BY JOHN CHRYSOSTOM.

I may remark, by way of preface, that the bees at Notre Dame are kept in three houses, each differing in warmth and structure, and that the hives are kept on the same stands summer and winter.

After removing the surplus honey in the fall, the hives are prepared for winter and left till apple-blooming. Then they may need some attention. This management saves the time and labor that would otherwise be given to packing for outside wintering or removing to cellars. Besides, the latter does not always prove satisfactory. In this article I shall confine my remarks to colonies wintered on the summer stands in the house by artificial heat.

On this head my observations have been especially accurate on two colonies—a strong colony of 5-banded bees on 16 frames in two stories of the Langstroth-Simplicity hive; and a very weak colony of dark Italians. It may be necessary to explain why the latter colony is so weak.

Last August I took three frames partly filled, with brood and adhering bees, and put them into an 8-frame hive, filling it with drawn combs. About the time they had their queen laying, I removed the young queen and replaced her by an old one, which injustice the bees resented by balling her for a day and a night. The following day they put her outside the hive. Tho I several times liberated her, yet the bees would not allow her to re-enter the hive until the next day, when they finally accepted her; but then, she was in bad condition. When winter came, I found that there were scarcely enough bees to cover two frames. To these I added eight other frames containing honey and pollen, making in all 16 frames in two stories. Thus prepared, they went into winter quarters.

Results: In order to ascertain as nearly as possible the number of deaths occuring in each hive, I put a wire screen before each hive so that the bees could not get out. This I removed from time to time to count the dead in the porticos. On Feb. 7 I found 13 dead bees in the portico of the 5-banded bees, and amongst them a young drone. The total number of deaths in this colony since Nov. 1, is 26, and in the weak colony, 36. Most of these died from the effects of cold, as I had neglected to contract the entrance. When wintered on this plan, the entrance should be small and protected from direct winds; and when the mercury falls much below zero, it is advisable to throw loose snow about the entrance.

On Feb. 10 the mercury stood about 60° in the shade. The sun was bright and warm, and the bees were ready for a flight. On removing the screens, it was a pleasure to look at the bees issuing from their hives so strong and frisky. I searcht several times during the day, and a dead bee was not to be seen at either hive. Even the weak colony gave me a pleasant surprise by their numbers and healthy appearance. When standing near the hives a sweet odor was perceptible.

The three essential elements necessary to winter bees as above described are *sunshine*,* *pure air from the outside*, and *artificial heat*.

That bees should pass through the winter so strong and healthy is certainly very gratifying and productive of good results. As soon as the first pollen and honey appear, there is a strong and vigorous force to collect it, as there are no funerals or house-cleaning to prevent them. Such wintering will do much to confute the idea of bees dying of old age, before they have lived 60 or 90 days. Such a thing is not in harmony with the laws of nature. The children may live as long as their mothers, and we find that the mother-bee lives three or four years, or even longer. The worker, or field-bees, die young, because, like soldiers in active campaigns, their brave little lives are exposed to innumerable dangers.

The successful wintering of bees in house-apiaries with, or without, artificial heat depends apparently upon little things. Some of these I shall enumerate:

Bees cannot be wintered successfully in a house-apiary on the windward. By *windward* I mean the side against which the winter storms blow. In this locality the coldest storms blow from the southwest, west and northwest. The openings in the walls of our house-apiaries are on the northeast, east, and southeast. Our success in wintering bees for four years has been uniform. It is advisable to have good wind-breaks on the north and southwest. The porticos should be protected from direct winds.

During the coldest weather this winter, when the mercury fell eight or ten degrees below zero, and the wind blew a gale from the northwest, the bees in an observation hive located on the sheltered side of the house were walking over the combs. On another day, when the wind blew directly against the portico of the hive, and the thermometer registered 28° above zero, the bees in the same hive were more compactly clustered than on any other this winter. This fact, I think, is quite significant.

When all the requisites for successful wintering in house-apiaries, with or without artificial heat, are properly understood and intelligently applied, the house-apiary will become as popular on account of its great convenience as it will be for its giving the best results in wintering bees. A house large enough to winter 30 or 40 colonies will also afford space enough for a honey-room, extracting facilities, a place for storage of hives, etc., and even a work-shop. The noise of the work-shop will not disturb the bees if the hives occupy a separate floor. Those who are interested in this subject may follow St. Paul's advice: "Prove everything, and hold fast to what is good."

If these remarks will be instrumental in making the long, weary hours of winter more comfortable for "our little sisters, the bees," and more profitable to their larger brothers who take care of them, the object of this article will have been accomplisht.

St. Joseph Co., Ind.

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*House-apiaries should have many small windows about 18x24 inches. It were well to have the sashes on pivots at top and bottom. This is a matter of convenience. The bees that leave the combs when the hive is opened will settle on the window and it is easy to get them out by turning the sash. These windows also admit sunshine on the hives the same as if they were outside, which fact, I think, is in more than one way beneficial. In very hot weather, dark, close-fitting blinds will keep the house cool.

CONVENTION PROCEEDINGS

Report of the Northwestern Bee-Keepers' Convention, Held in Chicago, Nov. 10 and 11, 1897.

REPORTED BY A SPECIAL BEE JOURNAL REPORTER.

(Continued from page 198.)

SECOND DAY—Afternoon Session.

SIMPSON HONEY-PLANT OR FIGWORT.

Mr. Dunne—I would like to ask if any one has had any experience with the Simpson honey-plant or figwort?

Pres. Miller—The Simpson honey-plant, or figwort, or carpenter's square, or heal-all, is before us. Who has had any experience with it? How many of you have seen it grow? Three. What do you know about it as a honey-plant?

Mr. Green—From my experience I should say that it yielded honey readily enough, but I don't know that it is practicable to raise it. It may be. I have never tried it.

Mr. Stone—I have seen it along the roadsides; in some places a good deal of it, and I have seen bees just swarming on it every day, and it blooms a long time, but I do not think it is fit for anything except for a honey-plant. It is a weed. If we can get a honey-plant that is better I would rather mow down the Simpson honey-plant and kill it out. I think that is just like the spider-plant.

Mr. Whitcomb—I doubt if it is profitable to cultivate anything for honey alone.

Mr. Green—I have seen considerable clumps of it growing. It grows all through the woods in our neighborhood, but it doesn't seem to be a very thriving and robust plant. It doesn't take care of itself very well and establish itself against other weeds as sweet clover does.

Pres. Miller—When the boom was first on for the Simpson honey-plant I sent off and bought plants enough to set out an acre, cultivated it carefully, and had a flourishing field of it. Bees workt on it, and they will wherever it is, but a honey-plant to be of any use must not cost too much, and this field the next year was not good for much. I took care of it as carefully as I would of corn. The plants died out, and I afterward found that there were scattered plants of it in my neighborhood that I could have gone and dug up, but I didn't know the plant in the first place. I think you will find very few succeed with it. I only know of one exception—Mr. Williams, of Missouri. I think every one else has given it up as a bad job. But they are still going on in the old countries with those things, and across the ocean they are still talking about the Simpson honey-plant, and are distributing seed. But we have got through with it, and they are now in the heat of the disease. I don't think it is worth planting at all.

WHAT TO SOW FOR HONEY ALONE.

"What honey-plant can I profitably sow for honey alone?"

Mr. Green—You can sow sweet clover if you have any waste land to sow it on, but not if you have land that is very valuable for other purposes.

Mr. Stone—I believe that Alsike clover will pay a large rent to just raise it for a honey-plant.

Mr. Dunne—Is there a difference between the Alsike clover and other clovers?

Pres. Miller—The Alsike clover, or Swedish clover, is medium in growth, and has smaller stems than the red clover. Perhaps as it ordinarily grows it doesn't grow quite so high, and the blossoms are medium between red clover and white clover, more nearly the size of white clover, and pinkish. If white clover grows rank it will grow as large as Alsike.

CRIMSON CLOVER, CATNIP, ETC.

Pres. Miller—How many are there present that have had any experience with crimson clover? That is one of the new clovers.

Mr. Stone—I have never grown but one crop, and not very much of that. It didn't succeed well through the winter. It grew in little patches and little clusters around, and I re-sowed it with Alsike in the spring, when I saw that it failed to be a stand. I learned from the government report at Washington that a number of animals, both cattle and horses, had been killed by the eating of crimson clover. The little hairs that are on the blossoms would accumulate in their stomachs in balls that were indigestible, and it would cause death. A number of cases that were examined and reported to the government station on examination were found to be caused by the balling of those little hairs.

Pres. Miller—I had supposed that was on the seed.

Mr. Stone—Yes, on the head. And they said that if the head matured until it got brown, that then was when the danger point was; that if it were cut very early it mist that, but there would be some heads in any condition of it almost that would make it possible for the injury to be caused.

Pres. Miller—I had quite a piece of crimson clover, perhaps a quarter of an acre, and while I do not believe that it is likely to be a very successful plant in this climate, not standing the winter, yet in some places it succeeds, and it may be well to have it tried more; but what I want to suggest is that all of you will do well to have a patch of it near your dwellings for the beauty of the flower. When in bloom it is a beautiful sight, well worth planting if the bees didn't touch it at all.

M. S. Miller—I believe Mr. Green spoke of the Simpson honey-plant doing well in a woody district. Is there any plant that could be sown in such a place that would do well; for instance, in a waste piece of woods that would not be fit for cultivation?

Pres. Miller—The Simpson honey-plant would come very well in that category; and another plant that will do tolerably well where it is partially shaded is the common catnip.

Mr. Baxter—I think the aster is better than either one.

M. S. Miller—Can a person cut catnip so that you can sow it?

Pres. Miller—You can get catnip seed, plenty of it.

Mr. Stone—It grows very much in hedges.

Mr. Baxter—I think that is from the protection the hedge gives it; the cattle don't tramp it.

M. S. Miller—In taking a number of old colonies of bees, such as a person finds scattered over the country, that have never been attended to, would it be advisable to try and use those old hives in connection with anything outside or using them for fuel?

Mr. Stone—Use them in the smoker.

Mr. Baxter—They are not good for the smoker, either. Use them for kindling. That is the best use for them.

Pres. Miller—I don't believe they are of any use for anything but kindling.

SPRAYING FRUIT-TREES—ENGLISH SPARROW.

Mr. Whitcomb—I would like to know how many present are troubled by having fruit-trees sprayed in the spring.

No hands were shown in response to the question.

Mr. Baxter—They don't use the spray with us very extensively. Some years we have used as much as a carload of blue vitriol right near the town in connection with London purple, but our people down that way have been educated to use at the proper time, altho for a short while there were two or three that thought the only time for the curculio was to spray right in the blossom, but they have gotten over that. But I think that it would be a wise thing for each State to adopt a law so as to prevent that, because I have known of instances where serious damage occurred by spraying at the wrong time, altho the horticultural societies and newspapers have taken up the subject so thoroughly that almost all that do spray now will spray at the proper time. There are very few, I suppose, that are still of the opinion they must spray right in the blossom.

Mr. Whitcomb—All the books say that the coddling-moth lays its eggs in the calyx of the apple. Some experiments were made at the experiment station of Nebraska, and Prof. Card says that is not the case. They made some discoveries that entirely contradict that.

Mr. Dunne—I would like to ask if the English sparrow is injurious to the honey-bee?

Pres. Miller—I have never heard of such a thing.

Mr. Baxter—It would be a very great wonder if it wasn't because it is injurious to almost everything else.

POULTRY OR OTHER BUSINESS WITH BEES.

M. S. Miller—I would ask whether in a small place poultry would interfere with bees. They will not, so far as I know, except in the case of ducks. Will any other kind of poultry eat enough bees to do any damage?

Mr. Whitcomb—No, sir.

Mr. Baxter—Not even ducks. I have ducks running all through my apiary.

Mr. Whitcomb—They will drink out of the same bowl, and not interfere with them. I have known chickens to eat bees, and to follow it up, but it is an acquired habit.

M. S. Miller—We had a few ducks at home, and they appeared to think that bees were the finest pudding ever made.

Mr. Karch—We have a great lot of chickens, ducks, geese and all, and I never noticed that any of the poultry interfered with the bees.

Mr. Baxter—I have chickens that eat bees—just follow up one hive after another, and eat them. I have watcht those chickens, and they invariably take the drones.

Pres. Miller—A question closely connected with that is the question as to what other business can most conveniently and properly be workt along with bee-keeping, and some have answered that the poultry business was one of the best for combining with bee-keeping.

Mr. Whitcomb—I should say horticulture.

Mr. Stone—I would say the same.

Pres. Miller—What kind of horticulture?

Mr. Whitcomb—Fruit and gardening.

Pres. Miller—How many of you know anything about the combination? Here are a number. Now tell us the advantages and disadvantages.

Mr. Karch—I think it would depend largely upon the location, whether horticulture would pay—the nature of the soil. In some places it is perhaps too cold.

Mr. Whitcomb—The honey-bee is one of the greatest friends of the horticulturist. I have always advocated that friends stand close together.

Mr. Stone—Mr. Becker, one of the members of our State Association, keeps a number of colonies, and in the neighborhood is a man who keeps three or four acres of raspberries, besides fruit, grapes, apples, peaches, and nearly everything of the kind. Mr. Becker has often had a flow of honey, a good flow from those raspberries of his neighbor's when the rest of us didn't have anything that our bees could go upon. He would have a number of hundred pounds of honey from those raspberries alone. My bees have workt very strong through the apple-bloom season. I have a great many apple-trees. Other fruits I haven't raised very extensively. But I know that my bees get a great benefit from those apple-trees, and his bees get a great benefit from those raspberries.

Mr. Baxter—We raised this year and shipt 25 carloads of strawberries, 6 carloads of blackberries, and 34 carloads of grapes. It is true that two of my brothers are in partnership with me in the fruit business, but they are not in the bee-business—that belongs to me exclusively. I have 250 colonies of bees, and altho during the month of June I devoted as much time to the gathering and shipping of strawberries as my brothers, it did not interfere to prevent my producing some 30 barrels of white clover honey in connection with the fruit. And I think it would pay well. Besides that, those big fields of strawberries were a great item in building up my colonies in the spring. I have seen it said that bees do not gather anything from strawberries. I know better than that, for I have tried it very extensively. We have something over 80 acres of strawberries, and we have been in that business now upwards of 10 years. The grape business—I can't remember when we didn't work in that, because it was my father's, and we grew up into it. The same with apples. We raised apples, grapes, strawberries, blackberries, and some currants, and we used to raise a great many raspberries, but it is difficult to ship them, and of course we have no home market, and have to ship them away to Minneapolis, St. Paul, Grand Forks and Denver, and all through the Northwest, and of course we have to raise such things as we can ship.

Dr. Besse—I don't know what a younger man than I would do, but for a year like this a man wouldn't want to do anything more than attend to his bees; with 125 or 150 colonies he doesn't want anything else to do. It takes a great deal of time to get supers ready, taking off honey and sell it; he finds it is about all he wants to do the year around—at least I do. On a small scale a man might keep a few bees and follow gardening or fruit-raising, or something of that kind. I think the orchard business, especially for the fruits, would go well together.

Pres. Miller—That one item should be considered. While all that is said may be true, it is also true that the busiest time in the small-fruit business comes at the busiest time in bee-keeping. I had a number of acres in raspberries and strawberries, and I found that at the very time when I was busiest with the berries I was busiest with the bees. So today, while I believe with Mr. Whitcomb that fruit-raisers and bee-keepers should be close friends and neighbors, I want them on the opposite side of the fence, so far as it works in my locality. At least I don't want to be the fruit-raiser if I am the bee-keeper, just on account of its coming that way. The probability is Mr. Baxter is of such executive ability he can oversee the two trades, but if he does much at directly overseeing, and doesn't delegate that overseeing to any one else at the busy time of picking berries, it will take about all his time, but he probably has some one to help in both departments.

Mr. Baxter—I don't oversee, Mr. President. I do the work myself. I work for extracted honey. If I workt for comb honey it would make a big difference. My supers go on the hive before the strawberries are ripe. I put enough on so that I don't have to put on more during the season.

Pres. Miller—So the bees don't keep you busy at the time of the berries?

Mr. Baxter—No, sir.

Mr. Whitcomb—The year 1892 was very wet with us, very wet and cold. I had 300 bearing cherry-trees adjacent to my apiaries, and during the time that the cherries were in full bloom there were two days in which the colonies workt profusely on the cherry blossoms. As a result of that we harvested upwards of 200 bushels of cherries, while my neighbors who had no bees got no cherries, and had to buy their cherries of me. Their trees were in just as good condition.

Pres. Miller—How far apart?

Mr. Whitcomb—A mile or two off. Their trees blossomed as profusely as mine, and I could not attribute it to anything else than the bees pollenizing the cherry blossoms.

ADULTERATION OF HONEY AND OTHER FOODS.

Miss Kate Will, a lecturer on "Science of Health and Pure-Food," addrest the meeting as follows:

"I read with great pleasure and interest yesterday in the newspapers about your resolution to Congress against the adulteration of honey. I lecture on health foods, and honey is something I am very much interested in, for I consider it a health food, and I have contended for quite awhile that it is useless to get up State laws on adulteration of foods, that we must go before Congress. We are having a series of meetings here on the subject of health, and we talk on different lines, and I talk on health food. We had a meeting of that kind yesterday. I brought it up. I told them there that we would have to go before Congress for a national law against the adulteration of foods. Of course you know better than I do how honey is adulterated, and with such a valuable health food as it is, I do wish something could be done about it to keep it pure and healthy. I am so glad you have taken it up, and I wish you success. Anything I could do through the woman's organizations I would be glad indeed to do."

Mr. Whitcomb—I don't think there is one-half of the adulteration of honey that the honey is given credit for. I don't believe there is a gentleman in this room that adulter*l* ates honey. I don't *know* anything about it. I couldn't *tcl* anything about it. I would like to know how many present adulterate honey.

Pres. Miller—All those present who adulterate honey please hold up their hands. (Laughter.)

No one responded, and Pres. Miller said, "We now stand adjourned."

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. O. O. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

To Several Inquirers.

One of the unpleasant things for me is to receive a letter containing a postage stamp or a stampt envelop. When I see one on opening a letter. I'm pretty sure that some one wants an answer by mail. A number have written me of late asking replies by mail. Now just stop a half minute and think of the time it has taken to write the replies you see on this page, and remember that it has to be done 52 times in the year. and if I answer all of the questions by mail, it would use up a good many weeks of the year. Probably there is not one question in twenty askt whose answer the correspondent would not rather receive at once by mail. If I answer at once by mail in one case I'd have to do so in all. See? *You* wouldn't like it if all the others were answered by mail, for in that case this department would cease to exist, and I've been led to believe that several of the readers of this paper were interested in reading the answers given. Now, if you were in my place, could you do other than to treat all alike?

Another thing. Be sure to say *always* that you want the answer in this journal, if that's where you want it, no matter if you've sent questions twenty times before. For altho I may be familiar with you and your writing, I may not remember whether I replied in this or some other paper. C. C. MILLER.

Acacia and Acantha as Honey-Trees.

What kind of a honey-plant is the acacia tree in California? also the acanthus, which is of Japanese origin. Last year we had a good flow from them. Do you know if they secrete honey every year? CALIF.

ANSWER.—Not being familiar with these trees, it will be a favor if some Californian will help us out.

Management of Weak Colonies.

I have two weak colonies of bees now, and to judge from appearances I should say they each contained about 8,000 workers and a queen. Our honey-flow will be here in about six weeks. Would I get more bees in time for it, by (1) uniting the colonies now, or (2) by leaving them as separate colonies until just before the commencement of the honey-flow, and then uniting? TEXAS.

ANSWER.—Perhaps you'd get more honey by uniting now than by uniting at harvest time, that is, if the colonies are so weak that they will need uniting at harvest. Possibly a compromise wouldn't be a bad thing. Take from one of the colonies brood and bees from time to time, and give to the other till it becomes very strong. Then if it becomes very strong, a week or two before harvest you can repay the favor and possibly have the one strong and the other in fair condition for the harvest, and get more from the two than from a united one. If, however, you find that can't be done, you can then give from the weak to the strong at harvest, and make sure of one strong one.

Suspected Honey--Dividing Colonies Early.

Last fall I put into winter quarters in our home yard eight colonies, and to-day but three are living—they being weak. I suspect that dread disease (foul brood) from the appearance of the combs and cappings, and wish to convert the combs into wax and honey, and the frames to ashes. Now, I do not know what to do with the honey after the operation of rendering.

1. What use would you advise me to make of it?

2. I have about 50 chaff hives, in some of which the suspected colonies have been; would you risk putting other colonies into them? If not, in their present condition, how can I make them fit for use?

3. I have 15 colonies in an apiary a few miles from home. When, without much risk, can I divide (I expect to send for queens and give queens at once) without risk of chilling the brood?

I went to a hive this forenoon and cut from one of the combs, which I suspect infected, a piece of comb which I send you in this mail. You perceive that it lacks the "ropiness" and the "glue-pot" smell; therefore I can scarcely believe that it is foul brood. ILLINOIS.

ANSWERS.—1. If the honey is of good flavor there is no objection to using it for table use. Of course not if it is foul and dirty, but there is no harm comes to the human stomach from swallowing some of the minute plants that are so deadly to the larva of the bee. If scalded it might be used for feeding, but you better not use it for feeding except early in the season, for it wouldn't be nice to get any of the scalded honey into the surplus combs, and it wouldn't be wholesome for wintering. Perhaps the best thing would be to sell it for what it is, and have it used for printers' rollers or some such manufacturing purpose.

2. Opinions are divided as to whether it's safe to use a hive in which foul brood has been, but you'll do well to be on the safe side and not use anything in the least suspicious. Boiling-heat kills the foul brood germs, altho freezing does not. If you can have a boiler large enough to take in half the hive, scald that, then the other half. Another plan is to wet the surface of the hive with kerosene, set it on fire, then before it has time to burn the wood itself, cover it up so as to smother the fire. Of course you'll take out the chaff and burn it.

I doubt whether yours is foul brood, but there's no harm in being somewhat suspicious.

3. Lots of harm done by dividing too early. Not merely chilling brood, but dividing the force when much more rapid gain would be made by leaving the force together. You'll hardly gain anything before about swarming-time—at least not till the colony gets to its fullest strength.

Sweet Clover.

1. I send a sample of clover. Is it the sweet clover of the North? Is bokhara clover the sweet clover?

2. Where can I get seed of the sweet clover?

My bees are doing finely. Fruit-trees are in full bloom here, now (March 18.) IND. TER.

ANSWERS.—1. As nearly as can be told from the crusht condition in which it came, the specimen sent is the common sweet clover of the North. Bokhara clover, sweet clover and melilot are all one and the same thing.

2. [See the advertising columns of the Bee Journal.—EDITOR.]

Feeding in the Spring.

1. I have a good colony of bees which I have to feed. How much sugar syrup must I feed them till they can gather enough honey to live on. This is March 24.

2. Would you encourage brood-rearing this early?

3. I got a colony of bees of a man late last fall. The bees came to his orchard and settled in a hive with a few frames. They filled the hive full of honey, leaving no room for brood. Now the hive is four-fifths full of honey, with combs crosswise and every other way, and I want to give them room for brood. Would the following do? Put a new hive filled with frames of foundation on the old stand, put an escape on top of the new one, then turn the old hive upside down on top of the new one. and drum on the old hive. If this will not do, what can I do? Of course the hives are the same kind, and I will feed the bees afterwards. IOWA.

ANSWERS.—1. Hard to tell just what they'll need, but you'll be safe to give anywhere from five to ten pounds, then give more later if they need it.

2. Yes, at least so far as to see there were plenty of stores, and keep the bees snug and warm.

3. Your plan would be likely to lose a lot of brood when brood is very valuable. Better set the new hive right under the old one, and if they're at all crowded for room for brood, there will be no doubt about their building down and rearing brood. The only trouble might be in case your hives have fast bottoms, but in that case you could split the bottom off the old hive.

T Super—Contraction When Hiving Swarms—Candied Unfinisht Sections—Use of Queen-Trap.

1. If you were to fit out a new apiary, would you use the T super. or some other one? Why?

2. When hiving swarms in a contracted brood-chamber, do you use the super the full size of the hive, or contract it also? or do you practice contraction in hiving swarms?

3. I have a nice lot of half or two-thirds filled sections that are uncapt, that have a few cells of fall honey in them that has candied. I want them for bait sections in the spring. Should they be cleaned out, or should they be used as they are, and let the bees take care of the candied part?

4. Will a heated plate answer to thin down combs in unfinisht sections?

5. How about the use of the queen-trap when one can be present only at noon and evenings? Will the swarm return and remain clustered on the trap, or will they enter the hive again? Should they remain on the trap, would it not be necessary to give ventilation from some other source while using the trap? Or would you, under the conditions named above, cage the queen as recommended by some, or practice Doolittle's plan for preventing swarming in out-apiaries? SOUTHERN OHIO.

ANSWERS—1. With my present knowledge, I should use the T super, because with it I can get nice sections of honey with less labor than with any other I've tried. It is entirely possible, however, that some new arrangement may come up that may be better than the T super, and if it were possible to wait, I would not fully stock up till I had pretty fully investigated.

2. I have never practiced contracting a super except in case of a prolonged and very slow harvest. If I hived a swarm on less

than the full number of frames, I'm inclined to think I should use a full super, but I do so little at hiving swarms that I really don't know what I would do.

3. I very much doubt whether you can use those sections in any possible way to produce first-class comb honey. Certainly it wouldn't be first-class if you leave candied honey in them—and the bees will not uncandy it—and you probably can't get the sections emptied in any way so there will not be granules left, and the least trace of that kind will affect the fresh honey stored in them. If you think best to use one of them as a bait in each super, be sure to keep it out of any honey you may sell as first-class.

4. Excellently. Indeed, that's just what the B. Taylor Handy leveler is, with the very important addition that it automatically stops the melting when it gets to a certain depth.

5. In most cases the swarm will return, whether the bees remain altogether with the queen, or all go into the hive, or compromise the matter by dividing up and going both places. Ventilation is important, and additional ventilation will be well unless the trap be made very large and open. I think it might be well to give Doolittle's plan a fair trial. It must be remembered, however, that what seems to work all right at one time may fail another. Also that a plan may be entirely successful in Doolittle's hands, and in some other person's hands a failure, just because some little kink is not followed up in one case as in the other, and the kink may be so little that Doolittle himself would hardly suspect it would make any difference. For instance, Doolittle said to put sealed queen-cells in supers and the young queen would hatch out, kill the old queen and take the reins of government into her own hands. I tried it on a pretty large scale. The young queens hatcht out all right, and in at least one case that I watcht closely the young queen was found on the combs in the brood-chamber a day or two after emerging from the cell. A day or so later she was gone. In every single case the old queen remained and the young queen was removed. I learned later, what perhaps I might have known in the first place if I had more carefully read instructions, that the work should be done at or near the close of the honey harvest. I had done it much earlier. So in trying any new thing we must not condemn the plan as a failure unless we know to a dead certainty that we have fulfilled every condition.

Spring Feeding—Smartweed Honey.

1. I had four colonies wintering on the summer stands, and have lost the strongest one from dysentery. They filled the brood-combs and 20 one-pound section-boxes of just such honey as I send you a sample taken from a section. Now, as I have these sections and the eight frames, of which the outside ones are solid, and the others more or less filled with this black honey, I would like to know if it would be safe or advisable to feed it when the weather permits the bees to work every day. I would like very much to use the brood-combs, as they are straight and almost free from drone-comb. They were drawn last season from full sheets of foundation. My bees are within one-half mile of the city; possibly they got into an old molasses barrel.

2. What kind of honey does smartweed yield? We have quite a lot of it here.

This honey was gathered in September. My three remaining colonies seem strong, and are flying now almost every day.

New Hampshire.

Answers.—1. It is safe to feed almost anything bees will take when they have frequent flights and are not storing in supers, unless it be honey from a foul-broody colony. I should not hesitate to use such as you have sent.

2. There is a difference in what is called smartweed. What is perhaps properly called smartweed has an exceedingly acrid taste when the leaves are chewed. The plant, however, which yields the most of what is called smartweed honey, if I am rightly informed, has no smarting taste at all, altho the two plants look very much alike. Its right name is heart's-ease. Heart's-ease honey, altho dark, is very much liked, generally, where it abounds, as in the Mississippi bottoms. The sample you send is probably a mixture of fall flowers and molasses, as there seems to be present quite a strong odor of the latter.

Starting in Bee-Keeping.

We expect to be novices in the bee-business this spring. We want to start in *right*. We are located a little south of the center of the State of Minnesota. Please tell us in plain English what kind of a hive to get, how made, how many frames, size of frames, how many stories, etc. Any other information about hives that would help a beginner would be thankfully received. Now having the hive all complete, what kind of bees shall we stock up with? We want the standard, the very best for this section. A thumb-nail full of your experience as a starter.

Brothers.

Answer.—First and foremost, and by all means get a good text-book. May be you better get two, so you needn't quarrel about which shall have it first, for it isn't pretty for brothers to quarrel. There's no harm in having different kinds of books, but whatever you do, don't have more than one kind of frame. At least only one size of frame, and probably the nearest to a standard size is what is called the Langstroth or Simplicity-Langstroth size (in reality every movable frame is a Langstroth) 17⅝ inches long and 9⅛ deep, outside measure. It doesn't matter so much just what the hive is if you're all right on the frame. Perhaps the dovetailed is as good as any.

You say, "how made," darkly hinting that you want instructions how to make the hive yourselves. Now I'm a good deal of a coward, and dare not tell you, for if I should, one of you brothers might sometime meet me with a gun in a lonely place, and a jury would hardly convict you for shooting any one who should give you encouragement to build a hive yourself without any experience, when you can get one all ready to nail together for little more than the lumber costs, and everything about it made with more exactness than any good mechanic could make it for double the money. Even if you think you must make your own hives, get one for a pattern.

Number of frames—that's a puzzler. I'd like a chart of the bumps on your heads first. If the bees are not to have very much intelligent attention, not less than 10 frames, and then they're not so likely to starve in winter. Even with the best attention it's possible 10 frames or more are best, certainly for extracted honey. But if your intention is to put all the brains you can into the business (don't forget a good book) perhaps an 8-frame hive run two stories part or all of the time may be best. With more than eight frames to the hive, you will hardly want more than one story for comb honey, and perhaps not more than one story for brood if you run for extracted.

Now, as a matter of important advice, I must not forget to mention a good text-book on bees as the very first thing. If you can't get one in any other way, sell out your right to the American Bee Journal and invest the money in a book, and then I'm sure you'll find some way to get the journal afterward, but get the book in some way, and then study it thoroughly. You'll find some things then that you'd like to ask questions about, and this department is always open for people like you.

Nearly forgot to answer what kind of bees. I can only answer for myself. If it was as easy to get one kind as another, I'd have pure Italian. If there were no other bees within five miles of me, I'd have pure Italians anyhow. But if common blacks are within a mile, it doesn't matter so much how you start, for your stock will be mixt more or less anyhow, and you can get fresh blood after you start. Expressage on bees costs so much, that in the latter case you might do well to start with whatever kind you can easily get right near you, and then you can get a pure queen afterward. Better start with the wrong kind of bees than the wrong kind of frames. You can change the bees better than the frames. Don't forget the book.

Questions on Size of Brood-Chamber.

1. How does G. M. Doolittle's article on page 49, favoring a 10-frame hive, correspond with your experience in using two 8-frame bodies for one brood-chamber?

2. What is the greatest number of frames you have had occupied with brood when the white clover flow began, where the queen had access to 16 frames?

3. Suppose we have 12 frames in one body, and reduce to eight frames at the opening of white clover, as per Mr. Doolittle (removing brood if necessary), and put on a 32-section super, would you consider such a colony in good condition to gather the greatest possible amount of surplus? If not, why?

4. If a 10-frame body will give the queen all the room needed, would it not be economy both of time and money to use the 10-frame instead of two 8-frame bodies?

5. Would you recommend other than the 8-frame hive, (one or two-story for the brood-nest) where white and alsike clover gives the main surplus, and heart's-ease, Spanish-needle and other fall flowers generally yield until frost?

Iowa.

Answers.—1. Mr. G. M. Doolittle is well informed, a careful observer and a conscientious adviser, and you're quite safe in trusting him. My experience corresponds in the main with his; whatever of difference there may be you will find in replies to your other questions and in summing up.

2. I may have had more than 14 frames with brood in them, but I hardly think I've had more than what would be called 14 frames of brood.

3. One thing I should not like about it is, that a fourth of the sections would be without any brood-combs under them, and I never could get bees to work as well in such sections.

4. Decidedly yes, if there is room for the queen and the necessary stores.

5. I don't know.

And now I may say on this whole subject of deciding as to the size of a hive, if I had to choose and start all afresh, I would have some difficulty to decide. Many things are to be considered. I certainly would not think of using an 8-frame hive and confining a colony to that the year round. In some cases a 10-frame hive wouldn't be big enough, and then it would be convenient to enlarge to 14 or 16 frames. Having a space under sections filled with dummies doesn't work satisfactorily, and on that account the 8-frame hive would have the preference. Other things being equal, a strong man would choose a 10-frame hive, and a weak one the smaller. Having two stories is more trouble than having a larger hive in one story. It's less trouble to have a large hive well stored for winter than a small one. The man who uses two stories must count on giving his bees close attention at the right time. His bees will take care of themselves better in a large hive. But if I were obliged to use only one story the year round, I suspect I'd want it larger than 10 frames.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all others possible to subscribe for it. See offers on page 223.

AMERICAN
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Pure Food Congress.—Last week we gave a short report from Rev. E. T. Abbott, who, with Hon. Eugene Secor, was a delegate to the Pure Food and Drug Congress which met last month in Washington, D. C. Now we have the privilege of presenting an interesting report by Mr. Secor, General Manager of the United States Bee-Keepers' Union. It will be read with interest, and is as follows:

REPORT OF DELEGATE TO THE PURE FOOD CONGRESS.

The "Pure Food and Drug Congress" which held a three-days' session in Washington, beginning March 2, was a notable and important gathering. Notable in its personnel, notable in the earnestness exhibited by its members, and notable in the fact that not a suspicious breath was detected on any delegate during the life of the body. This fact alone marks its lofty purpose and its fealty to a high ideal. Reformers need no stimulant to action except a noble aim. The delegates and visitors were of such character and ability as to impress one with the idea that some important object was behind the motive which brought them together.

Altho this was the first national gathering of the kind, 21 States and about 15 organizations were represented by regularly appointed delegates. From those States which have the best and most efficient pure food laws—notably Ohio, Pennsylvania, and New York—the largest delegations were present. These States, having had the most experience in trying to enforce State laws against adulteration and misbranding, feel the necessity of national legislation along the same lines.

Leading chemists, celebrated physicians, and earnest educators, were in attendance. Dr. H. W. Wiley, who is at the head of the Division of Chemistry of the United States Department of Agriculture, gave a very instructive lecture before the Congress, illustrated by samples of food products most generally adulterated. Secretary Wilson was present and addrest the body, as well as Congressmen.

The object of this congress was to unite all food and drug interests on a uniform plan of operation before the Congress of the United States. Heretofore every specialized interest was pressing its own claims independent of all other interests. The M. D.'s thought only of drugs, the dairymen only of butter, the bee-keepers only of honey, etc. If all these and all other organizations representing people who demand honesty in the preparation, branding and marketing of all products, especially those intended for human consumption, could unite on a common ground, and unitedly present to the Congress of the United States their combined influence in the interest of the unprotected consumer, a long stride forward would be accomplisht.

Competition in business is now so intense that the honest manufacturer or dealer in food products or medicines has no show in the market of the country. Adulteration, misbranding, and imitations, are carried on to such an extent and produced with such skill, and are prest upon the public with such persistency and adroitness that the conscientious manufacturer of food or drug preparations cannot compete and prosper. Therefore, in the promotion of the pure-food idea we have not only the consumer with us, but also all dealers and manufacturers who would prefer honesty to fraud if they can be protected in their business.

State laws alone are insufficient. Decisions of the United States Supreme Court touching the interstate feature of our commerce renders it necessary to reinforce State laws by national enactment.

The aim of this convention was to agree on a Bill to present to Congress. The Brosius Pure Food Bill, which had already been introduced in the House, was taken up and carefully considered by a committee of 25, representing every food and drug interest. Mr. Abbott was placed on this committee. He and I first went over the Bill very carefully, keeping in mind the industry which we represented, and when it had been considered in committee I noticed it was reported back endorsing the suggestions made.

Thus the Bill ran the gauntlet of every interest represented in the convention. When reported back it was taken up section by section in committee of the whole, and almost unanimously endorst. It will therefore go through Congress with the united influence of nearly all the Pure Food organizations; all manufacturers of foods, medicines and condiments who are honest; all dealers who would rather sell a pure preparation than an adulterated one, and *all* consumers for it goes without saying, that the great mass of people want honest dealing—they want to pay for what they *buy*, and not pay a high price for a cheap article.

I said that heretofore there has been a great diversity of opinion regarding the ideal pure-food law. Some wanted imitation butters *prohibited*. Some wanted glucose *taxt* out of competition. Some thought that all combinations and mixtures should be outlawed. But the sober, second thought of all the interests brought together at this convention was to allow the greatest freedom to manufacturer and consumer consistent with honesty.

If the people prefer glucose to extracted honey, let them buy it; but they have a right to know *what* they get, and ought not to pay for the former when they get the latter. The bottler has no right to label pure glucose, or any package containing any portion of it, "Pure White Clover Honey." This is what they are doing now, and this is what the producer of honey has to compete against.

Now let every bee-keeper write a personal letter to his Representative and Senator, asking them in the interest of fairness to every honest industry to vote and urge the early consideration and adoption of the Brosius Bill, H. R. No. 5441. Something like the following might do, in writing to your representative in Congress, if nothing better can be said:

TO THE HON. ———— ————,
Washington, D. C.,

Dear Sir:—As one of your constituents who is interested in the subject of food adulteration, and anxious that all preparations of food and drugs shall be put on the market for exactly what they are, I write to ask your support and influence for the Brosius Pure Food Bill, H. R. No. 5441, now before Congress, which I understand to be in the interest of honest branding of all preparations consumed by man.

I represent an industry which is suffering from the unjust and dishonest competition of a cheap and inferior adulterant, but I ask your support of this Bill because I believe it will protect all honest producers and dealers, and discourage fraud and deceit in the preparation of everything intended for human food, and will aid in the enforcement of State laws enacted in the interest of pure food.
Respectfully yours,
———— ————, *Bee-Keeper.*

I have only to add that the delegates of the United States Bee-Keepers' Union received full recognition at the convention, being placed on the most important committees, and granted equal rank and honor with other organized industries. They were able to correct some false impressions, and to place the industry of honey-production on an equal footing with other rural occupations before the promoters of Pure Food legislation.

EUGENE SECOR,
Delegate to the National Pure Food and Drug Congress.

Forest City, Iowa, March 29, 1898.

We give nearly all our editorial space this week to the above subject, because we believe it is an exceedingly important one. We trust that bee-keepers will at once act upon the suggestion made by Mr. Secor, so that their Congressmen may be prepared to vote intelligently when the Brosius Bill comes before them for action.

Judging from the reports made by Messrs. Abbott and Secor, we blieve that it was one of the wisest things possible for the United States Bee-Keepers' Union to send its delegates to the Pure Food Congress. They did their work well, and as Mr. Secor says in his last paragraph, "placed the industry of honey-production on an equal footing with other rural occupations before the promoters of Pure Food legislation."

◆

Paul Whitebread and His Apiary.—Mr. Whitebread, whose apiary is shown on the first page this week, writes us as follows about himself and his apiary:

I was born Oct. 31, 1869, in Luzerne Co., Pa., where I have ever since had my home. In 1892 I became interested in bees and bought a colony in a box-hive at a public sale. The next spring I sent to Ohio for a colony of Italians in an 8-frame dovetailed hive, then I subscribed for a bee-paper and bought all the best bee-books I could find, and increast my bees by artificial and natural swarming. I never lost a swarm by absconding (going to the woods at swarming, or any other time), but I had heavy winter losses till I filled the upper stories with chaff, and laid something across the top of the frames for the bees to pass from one comb to another.

Last spring (1897) I started with 45 colonies, and increast by natural swarming to 65. I got 1,100 pounds of comb honey. I produce no extracted.

A few years ago but very few bees were kept around here, but now there are lots of them, and nearly all Italians or hybrids, and in improved hives. I have tried the different races of bees, and have settled on the 3-banded leather-colored Italians; and in hives I find the 8-frame dovetail with Hoffman frames my choice, but I was thinking the hive and frames might be a little deeper, so I built 16 hives 2¼ inches deeper than the regular dovetail, and had them filled with swarms. They winter bees most excellently, and I have had some in use now two seasons, and I could find no difference in the amount of honey gathered per colony between the standard and the deep frames.

I have in my apiary 65 colonies—45 in regular dovetailed hives, 16 in deeper hives, but same width and length as the regular dovetail, two in hives with frames 13x9, one American, and one box-hive. The hives stand in rows 6 feet apart, aad 3 feet apart in the rows. All the hives face the south, and are on stands 4 to 6 inches high.

On the corner of the hive with the cover off, is my "smoke engine;" and the frame I hold in my hands is a Hoffman. It was rather cold, and the bees were clustered on the center of the combs when the photographer came, it being Nov. 17, 1897, almost too late to open a hive.

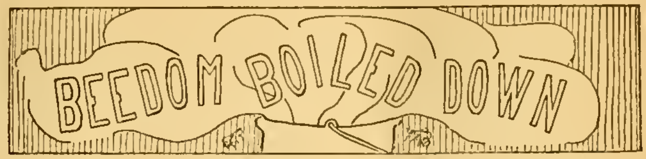
They were nearly all packt for winter, with chaff in the upper story or super. (Myself you can see in the picture, but my wife you cannot, for I have none.)

PAUL WHITEBREAD.

Perhaps by the time Mr. W. has another picture of his apiary taken, he will have it a little more complete, showing his wife, who, no doubt, whether or not she is a good baker, will ever after be sure of having good "White bread" in her house.

◆

A Convention in Wisconsin.—Mr. N. E. France, the hustling State Inspector of apiaries for Wisconsin, expects to hold a meeting of bee-keepers at Ft. Atkinson, April 11. He has already promises of an attandance of 60. This will be a fine opportunity for bee-keepers in Jefferson Co., Wis., to meet Inspector France, and also to have a good bee-convention. Go if you can, and help in the meeting.



To Preserve Combs of Pollen, take them when they are fresh from the hive; with a dredging-box, powder them with fine sugar, lightly knock off the superfluous sugar, and then put them away in a suitably dry place.—Noerdl. Bztg.

* * *

Selling Honey—Producing honey is one thing, and selling it another, in the judgment of Friedemann Greiner (Gleanings, page 169), and he thinks it might be well if New York bee-men had something like a honey-exchange, with some one like S. A. Niver for salesman.

* * *

Slant of Cells.—E. R. Jones says in Southland Queen, that in transferring brood-combs it doesn't matter which side up the combs are that were used for brood-rearing when first built, but those first used for storing honey are built with an upward slant, and are better right side up.

* * *

The Holtermann Hive-Cover, as described in Canadian Bee Journal, is one which telescopes half an inch, has two end-pieces, two side-pieces, a bottom-board, galvanized iron top, with packing of ashes, sand or loam between the boards and iron. Claims to be cheap—doesn't say how cheap—water-tight, and a good protection against heat and cold. Surely aiming in the right direction.

* * *

A Longing for Better Spelling crops out in a foot-note in Gleanings. The editor says: "I wish both precedent and custom would permit us to spell by the phonetic method; that we might even go as far as Bro. York, in the American Bee Journal; but as we do so much printing for other parties, our printers and proof-readers would be in a snarl of confusion if we attempted to carry on the two systems—can't do it."

* * *

Score One for Full Sheets.—American Bee-Keeper quotes J. A. Green at the Chicago convention, on the use of comb foundation in section honey: "If you have a small strip in the top the consumer can tell it; if not, nine times out of ten he can't detect it;" and adds that if there is a difference in the foundation and natural septum, to associate the two in one section is to invite the attention of the consumer to the contrast.

* * *

Breeding from Good Stock.—Of late considerable has been said about breeding to improve stock. The editor of Gleanings has seemed just a wee bit inclined to throw cold water on some phases of it, but the editor of American Bee-Keeper says, "Too much cannot be said regarding the improvement of our stock." J. B. Case gives a strong illustration of gain in amount of crops, simply by rearing queens from colonies that gave largest yields.

* * *

Cause of Low Honey Prices.—Ed Jolley, in American Bee-Keeper, thinks one reason for low price of honey is the fact that producers rush off the crop to commission-men, and they being overloaded, each one tries to put the price a little lower than others to give their shippers first chance, and this honest effort results in low prices for all. Another factor is competition with sugar and syrups. Thinks unity among producers and thorough organization the desideratum.

* * *

Working Up the Honey-Trade—J. H. Martin is backt up by the editor of Review in saying the permanent results of honey exhibitions at fairs are by no means as great as generally supposed. People see so much of everything and look so fast that few permanent customers are made. Much more efficacious are exhibitions for a day or more at groceries, explaining to customers and distributing honey-leaflets. The California Exchange has been doing a good thing by keeping two hustling agents on the road to drum up trade.

* * *

Effects of Different Honey-Flows.—In Gleanings, R. C. Aikin gives some of the results of his observations from scale-colonies. He thinks something like a third of the ingathered nectar is lost in evaporation. With a daily average of 1½ pounds, even strong colonies could scarcely be induced to do anything in sections, the tendency being to lengthen the cells in the brood-chamber and crowd the honey in there, rather than to build comb in a new place. In 1894 he got more extracted than comb, but a lot of the extracted-honey colonies starved in winter and the rest had to be fed in spring, making the advantage over comb honey more apparent than real. Bait sections were filled, no matter where they were put in the super, being usually the only ones filled. For good work in sections, especially in the hands of any but an expert, he thinks a flow of three to four pounds per day is needed.

* * *

A Robber-Stopper.—A simple and ingenious instrument to stop robbing is given by M. Pirson, in Rucher Belge. Take a cigar-box (any similar box will answer, even a paste-board box); remove the lid and one of the sides. At one end make a hole about ⅜ inch square, so that one bee at a time can pass, and cut out of the bottom a strip perhaps 4 inches by ⅜. Place it at the entrance of the hive, closing any part of the entrance not closed by the robber-stopper, and the robbers are afraid to go in the large hole. If a single one enters the small hole it will be dispatcht.

* * *

Disturbing Bees in Winter.—Editor Hutchinson copies C. P. Dadant' article from the Busy Bee, in which he strongly argues the damage arising from winter disturbance, then calls up the discussion in the first number of the Review publisht, in which were given many instances where bees had been disturbed during the winter repeatedly, moved from one part of the country to another, hives opened in cellar, bees fed, etc., and no harm done. Well, it's some comfort to know that one doesn't really need to kick 'em around much in winter, anyhow.

* * *

Sweet Clover.—Prof. Cook is taken to task in Gleanings for his sweet clover views. The editor says: "My, oh my! where has Prof. Cook been these years?" Mr. Boardman and a dozen others can show him that stock prefer it to other fodder; the Ohio Experiment Station that were once down on it, favors now its introduction, and in some parts of the West hundreds of acres of it are grown, and hundreds of tons of it cut for fodder. He ends up by saying: "Where nothing else grows it is a Godsend. I should almost as soon expect to hear Prof. Cook say the world is not round as to argue against sweet clover."

* * *

Cleats vs. Handholes for Hives.—The Straw man of Gleanings gloats over the fact that two such men as Mr. Boardman and Mr. Doolittle agree with him in preferring cleats to handholes for handling hives, to which the editor replies: "I am half inclined to believe that you and Mr. Boardman are right; but keep this to yourself. We make the handholes because they are cheaper, take less room in crating, and because bee-keepers generally are satisfied with them. I suppose the fact is, the average bee-man does not lug his bees in and out of the cellar as much as you and Mr. Boardman do, and that is why he doesn't complain."

* * *

Variation in Bees.—J. E. Crane, in an interesting article in Review, declares that variation in bees as to their different characteristics, is fully as great as among other domestic animals, and as valuable. He instances difference in temper, comb-building, promptness in working in supers, daubing with propolis, gathering pollen, swarming, etc. He instances one colony that had the peculiar trait of tearing down their brood-combs in spring apparently out of pure cussedness, and after they had done so for the third spring he knockt out the trait by changing the queen. The moral of it all is that there is a fine field for intelligent and progressive bee-keepers to greatly improve their stock by proper selection.

* * *

Somewhat Voracious Mosquito-Hawks.—The voraciousness of mosquito-hawks or dragon-flies that fill the air by tens of thousands around apiaries in localities near the sea in the South, catching and devouring bees by wholesale is something frightful according to the editor of the American Bee-Keeper. On several occasions he caught two that were eating bees, allowed one to eat all that was eatable of the other; "then turning the long, slender posterior of the still eager gourmand to its head, it would immediately proceed to consume its own body with the same apparent avidity and relish that it had shown for its earlier victims, the bees." So those Florida fellows are not without their own troubles.

* * *

Plain and Tall Sections are not favorably considered in the Canadian Bee Journal. The editor says go slow and look on for a season. He says "it is unreasonable to suppose that the bee-space, secured through an attachment to the separator instead of the section, would give a better-filled section." Thinks bee-keepers who adopt this style of section will be disappointed and lose money. S. T. Pettit calls the plain section "a silly fad." If the bees are crowded as he usually crowds his to get well-finisht sections, the cappings would be fastened to the fence. "This talk about less peep-holes and better-finisht sections is all nonsense." He objects to a tall section that the foundation is more liable to sag and curl out of shape than in a square one; may look a little better, but there will be no more money in it in the end.

* * *

Bee-Keeping for Farmers.—D. N. Ritchey is very emphatic in the belief that every farmer should keep bees, and says a farmer who hasn't one or more colonies is not up to the times, which is a little rough on T. B. Terry and other leading agriculturists. He thinks not five per cent. of the farmers have honey on the table as food, and he probably might have made the percentage much smaller without distressing the truth. A notable statement is this: "I can show you farmers living by me who had not had a crop of clover seed for 20 years, until I moved here and bred my bees to such a size that they can work on the red clover; and now they are getting large yields of the very best of seed."—Busy Bee.

* * *

Plain Sections are somewhat discust by Hasty in the Review. Apparently taking it for granted that they will be filled out more plumply than the others, with almost certainly no collusion with Doolittle he falls into the same line of argument, picturing the not over-skillful Bridget as with case-knife in hand, she cuts out the honey. "Half the time the knife wanders away from the wood. Besides the main square, several thin slices of comb have to be stackt on one side of the plate, to the serious detriment of looks." Where the outside row of cells is not sealed, even a child can see where to cut. The edges of the cake are all nicely rounded off to start with, and will remain so. He concludes that plain sections will look best at grocer's and the other kind on the table, and "good looks on the table are all our customers are willing to pay for when once their minds are directed to the matter. And those of us who sell largely to consumers are likely to do some missionary work right in that spot."

* * *

Plain Sections.—A little set-to in Review between Doolittle and the editor. Referring to that beautiful picture in the Review of the four plain and four old-style sections, in which the plain ones were so much better filled out next the wood, Doolittle says he decided at once he preferred for his own use one of the old-style sections because it would cut out more easily, look better on the plate, and not drip so much. He thinks also that the two lots of sections were not built by the same strain of bees. Hutchinson doesn't know about the bees that built the two lots, and admits he'd choose for his own use same as Doolittle, but gets back at him in good style by saying, "the time when we, as producers and sellers of honey, wish a section to look the most attractive, is when it sits on the counter and there is a man with 15 cents in his pocket standing in front of it and trying to decide whether it is best to have the money and the honey change places." He also considers it very important that the comb should be well filled to the wood to secure safety in shipping, and even in handling after it reaches the grocer.

* * *

Cleome Pungens, or Giant Spider-Plant.—Rarely does one see any notice taken of bee-keepers' interests in seed catalogs, but here is a notice of one of the novelties in flower seeds of several years ago, in the catalog of R. Scott & Son:

"This is one of our native annuals, but little known and yet well worthy of general cultivation. It is a robust plant, growing vigorously four to five feet high, unaffected by wind or weather, and flowering profusely and continuously for months. In fact, it is a *perpetual bloomer;* it begins to flower when only a small plant, the spikes continuing to increase in size as the plant grows, until they reach upward of two feet in length. The flowers are very showy, with long, slender stamens; single petals measuring an inch across, and of a bright rose color. As the spikes grow and the lower flowers drop off, the curious seed-pods are formed—the plant maturing ripe seed while still in full bloom. These long, slender seed-pods, reaching out in every direction, are carried upon still longer stipules, giving the effect of a *many-legged spider,* with the bright bunch of flowers as the head. As a background, in a group or scattered among shrubbery, *Cleome Pungens* is very effective; it grows freely from seed sown in the open ground, thrives luxuriantly, and blooms all summer, no matter how unfavorable the season may be. *It is also one of the very best honey-producing plants.* The bees delight in it, and cluster about it constantly while the flowers are open, which is after 5 o'clock in the afternoon and before 10 a. m.

DO NOT FAIL TO WRITE US FOR PRICES ON THE——

ONE-PIECE SECTION

In both Small and Large Quantities....

We have all the up-to-date Machinery, and our lumber is as white as snow . .

THE ONE-PIECE SECTION COMPANY,

Prairie Du Chien, Crawford Co., Wis.

February 10th, 1898. 7Ctf

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The RURAL CALIFORNIAN

Tells all about Bees in California.

The Yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by and expert bee-man. Besides this, the paper also tells you all about **California Agriculture and Horticulture.** $1.00 per Year; Six Months, 50 cents. Sample Copies 10 cents.

THE RURAL CALIFORNIAN,

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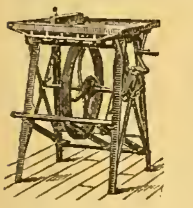

Read what J. I. PARENT, of CHARLTON, N. Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will." Catalogue and Price-List Free.

45Ctf Address, W. F. & JOHN BARNES, No. 995 Ruby St., Rockford, Ill.

Farm Bee-Keeping.

The only bee-paper in the United States edited exclusively in the interest of the farmer bee-keeper and the beginner is THE BUSY BEE, publisht by—

Emerson T. Abbott, St. Joseph, Mo.

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The American Poultry Journal,

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If you want the BEST... Honey Extractor

Get Williams' Automatic Reversible, And You Have It. **Address,**

VAN ALLEN & WILLIAMS,

10Etf **Barnum, Wisconsin.**

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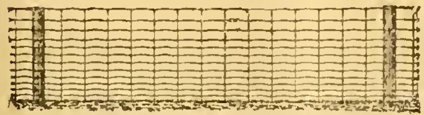

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every spring is needless. No "top rails" to lay up, nor need to chase down the lane after every storm if **Page Fence** is used. Send for "spring styles" and prices. See our ad. in next issue.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

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GENERAL ITEMS

Gathering Pollen.

My bees are doing very well here. They have been gathering pollen since Feb. 5, and will soon work on tree blossoms.

OSCAR GESSNER.

DeKalb Co., Ga., Feb. 25.

Two Seasons' Report.

I started with 5 colonies of bees two years ago, increast to 13, and lost one. Last year I increast to 32, and removed 700 pounds of nice comb honey in one-pound sections. Success to the American Bee Journal.

JOHN H. AMOS.

Not a Good Season.

I have 22 colonies that seem to be all right. Last season was not a very good one with us. I had 14 colonies in the spring, sold 3 swarms, increast to 22, and got 300 pound of comb honey. I sold it at 12½ cents.

WM. M. MILTON.

Franklin Co., Kans., March 5.

The Season of 1897.

My bees did very well in 1897. I started with 17, increast to 31, doubled back to 25 colonies, and got about 500 pounds of honey, about half comb and half extracted. My bees seem to be in good condition so far this winter.

WINCHESTER RICKEL.

Kosciusko Co., Ind., Feb. 20.

Seem to be Wintering All Right.

I have taken the American Bee Journal for a good many years, and could not keep bees without it. I am wintering 143 colonies, and they seem to be wintering perfectly. I had about 13,000 pounds of extracted honey last year from 100 colonies, spring count.

F. B. FARRINGTON.

Winnebago Co., Iowa, Feb. 21.

Hopes for a Good Crop.

Bees are all alive. The sun shines and the spots don't show much now. I feel fairly well, and hope for a good honey crop, and a better market. It has been weak the past two years. I have quite a lot of honey on hand, and if I could find ready sale I would be content to stick to it, but I expect to stick without the content, any way, if not any improvement. Swim or sink.

E. H. STURTEVANT.

Washington Co., N. Y., March 2.

Several Seasons' Report.

I commenced in 1895 with 2 colonies, and got no honey or swarms that year, but in 1896 I got about 15 pounds of surplus and 3 swarms. I lost one in wintering, in 1897, and had 4 left in the spring. I had 9 swarms, and about 200 pounds of honey, and to-day all my bees are having a good flight—12 colonies in all. I lost one colony last fall. It became queenless. I winter my bees on the summer stands.

B. F. STURGEON.

Columbiana Co., Ohio, March 7.

That Big Yield of Honey.

I see I have been called up to explain a mistake; also I received a private letter or two "calling me down," something in the same manner as did Mr. H. F. Baker, of Florida, for reporting such a large yield of honey.

In the first place, I did not intend anything should be printed. All I *said* was to give the editor to understand that I was getting a great deal of satisfaction from the American Bee Journal. I did not have

Sweet Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)	.60	$1.00	$2.25	$4.00
Alsike Clover	.70	1.25	3.00	5.75
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Alfalfa Clover	.60	1.00	2.25	4.00
Crimson Clover	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

GEORGE W. YORK & Co.
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Southern Home of the Honey-Bee

Is now ready for your orders for QUEENS of either 3 or 5 **Banded Italians and Steel Gray Carniolans.** More than 300 Tested Queens to begin with. Untested, either race, 75 cts. each; June and until October 50 cents each. Tested $1.00 each. Good Breeders, $2 each. Straight 5-Banded or "Faultless" Queens, $5.00 each. Satisfaction guaranteed.

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Successor to Hufstedler Bros.,

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BEE-KEEPERS' SUPPLIES in general, etc. etc. Send for our new catalog. **Practical Hints**" will be mailed for 10c. in stamps. Apply to—

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OUR PRICES are worth looking at. We are making the new

Champion Chaff-Hive

with dovetailed body and supers, and a full line of other Supplies, and we are selling them CHEAP. A postal sent for a price-list may save you $$$$

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That covers the whole Apicultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

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Liberal Discounts to the Trade.

PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y.

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BEE-KEEPERS! Let me send you my 64-page Catalog for 1898

J. M. Jenkins, Wetumpka, Ala.

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any thought of telling a big story. I only intended to say that we have a little honey in this State, and that I can *divide* and get some honey. I think from the result I did obtain, I could almost or quite obtain the results reported, that is, taking it as the editor explained, by taking the whole increase, as we have a very heavy fall flow.

The statement I intended to make was that, from a colony artificially made, that is, *one artificial swarm hived on only starters*, I took off 137 one-pound sections of honey. Now, how the figure of the 1-pound sections got fastened on to the 137, I cannot understand. But I could tell a story much larger than I intended, but I don't want to get the reputation for big stories.

Clay Co., S. D. **Thos. Chantry.**

[It looks as if we got Mr. Chantry's figures somewhat mixt. We are glad to give the correction.—Editor.]

◆

Results of the Past Season.

We had a good flow of white clover honey till July 4, and got some of the finest honey I have seen. But we had dry months of July and August, and the bees stopt short carrying in any honey until the first of September, when we had a good honey-flow again, but it was of a dark color. Our averege was 75 pounds per colony. We have had a mild winter so far, and bees are wintering well, both in the cellar and on the summer stands. **J. G. Rislow.**

Winnebago Co., Iowa, Feb. 21.

◆

First Flight Since Thanksgiving.

The bees had a good flight here Feb. 8—the first since along about Thanksgiving. They are affected with dysentery, and have spotted the hives considerable. I have lost but one colony, that starved with honey on the opposite frame, the weather being so cold that they could not reach it. It was in a single-walled hive. To-day the weather is more springlike, and for the bees favorable, with no bottom to the roads, the mud being so deep that it is almost impossible to get around with a team. **J. M. Young.**

Cass Co., Nebr., Feb. 14.

◆

Anti-Adulteration—Gathering Pollen.

I am deeply interested in the pure food and drug movement. I think it is one of the most important subjects now before the American people. It seems to me that enough poison has gone down the throats of the people in adulterated food. The bees have been confined to the hives but three or four days at a time this winter. They have been gathering pollen from maple and elm for some days. The honey-flow is not affected here by rainfalls in the same way it is in California. For instance, the poplar is the first important flow, and at that time of year we have sudden heavy rains which frequently come when it is in bloom, washing away the nectar.

I could not think of doing without the American Bee Journal. **Jno. M. Kelly.**

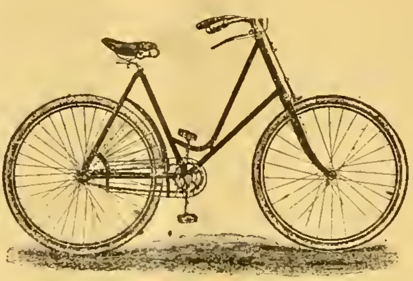
Jackson Co., Ala., Feb. 22.

◆

Mild Winter—Manzanita Honey.

I lost one of my colonies last fall by worms, being unable to attend to them, but I have 13 colonies left to start with in the spring. We have had a very mild winter here so far. The bees have been gathering pollen for about two weeks from the willow and hazel. The peach blossoms are beginning to open. I am afraid we will have an early spring, and kill all our fruit if the weather doesn't change. Our coldest nights this winter were about the first two weeks in January. My bees look fine. I am just able to hobble out to my bee-house. I have a bee-house with two rows of hives facing east and west. I do not think we can do without a bee-house here, on account of the long, hot summer.

I have noticed that the manzanita does not bloom every year. I would like to hear from some of the others about manzanita



A Good Bicycle Free

Now, then, young men and young ladies, also boys and girls, take advantage of this offer and get a Wheel (**A THOROUGHLY GOOD ONE**) with a little work. To increase our circulation we have made arrangements with a first-class concern in this city to furnish us with their well-known 1898 Model

ALAMO WHEELS

at a price which enables us to give one **FREE** as a premium for sending us **50 New Subscriptions** to the Bee Journal at $1.00 each. You can send them in as taken, and when your list of 50 is complete, we will ship your beautiful wheel, *freight paid*, to your nearest depot. This wheel retails in the ordinary way at $50.00—and it concerns nobody but ourselves how we managed to get in on the inside cut price. For *40 Subscriptions* we will ship a Juvenile of the same make. Below we give *specifications:*

Frame—Shelby Seamless Tubing. 1⅛ Main Frame. Connections—Steel (selected.) Fork Crown—Oval (drop forged.) Handle Bars—Steel or wood, drop or upturn; cork grips. Wheels—28 inch. Pedals—rat trap. Rims—best elm. Tires—Morgan & Wright or Vim. Spokes—selected piano wire. Bearings—Tool steel (turned by experts.) Gear—64 to 80. Saddle—leather (rubber or felt neck.) Weight—23 to 25 pounds. Color—black, maroon, nicely striped. Special color by arrangement. Furnishings—Tool bag oiler, wrench, air pump, etc.

Ladies' model built on same lines with the usual difference between sexes, such as rubber pedals, etc.

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Bee-Smokers and Honey-Knives!

Smoke Engine (largest smoker made)	4-in. stove.	Doz. $13.00;	each, by mail,	$1.50
Doctor	3½ in. stove.	Doz. 9.00;	"	1.10
Conqueror	3-in. stove.	Doz. 6.50;	"	1.00
Large	2½-in. stove.	Doz. 5.00;	"	.90
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Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

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Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4 inch Smoke Engine too large.

January 27, 1897. Truly, W. H. Eagerty, Cuba, Kansas.

Mr. Bingham, Dear Sir:—Please send per mail a 4-inch Smoke Engine. I have one of your Smokers; it is too small in time of trouble.

February 21, 1898. A. F. Seward, Riverside, Calif.

9A9t **T. F. BINGHAM, Farwell, Michigan.**

Page & Lyon Mfg. Co. New London, Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

Please mention the American Bee Journal. 7Atf

DR. PEIRO,

CENTRAL MUSIC HALL, CHICAGO,

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ONE MAN WITH THE **UNION** COMBINATION SAW

Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing, Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery. Sold on Trial. Catalogue Free.

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Basswood Honey FOR SALE

We have a limited number of barrels of **very best Basswood** Extracted Honey, weighing NET about 280 lbs. which we are offering at 6 cents per lb. f. o. b. Chicago. Do you want a barrel or so of it? If so, address, with the cash,

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My 40-page Catalog of my Specialties, and **Root's Goods at their prices.** I carry a full line of BEE-KEEPERS' SUPPLIES, and can ship promptly. Catalog Free.

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FIRST PRIZE WINNERS

Our 1898 Mammoth Poultry Guide of 100 pages mailed FREE. Something entirely new, tells all about poultry, how to be a winner, how to MAKE BIG MONEY. Contains beautiful lithograph plate of fowls in their natural colors. Send 15 cts. for postage. **JOHN BAUSCHER, Jr.** Box 94 FREEPORT, ILL.

44A26t Please mention the Bee Journal.

QUEENS Untested, after April 1, $1; Tested $1.50; Select Tested, $2. Imported queens, direct from Italy, $5 each. The best of stock, either Golden or Leather Colored. Write for price-list. HUFFINE & DAVIS,
11A4t Ooltewah, Tenn.

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For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 26 cents per pound, CASH. No commission. Now if you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

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118 Michigan st., CHICAGO, ILL.

BEE-SUPPLIES!

We have the best equipt factory in the West. Capacity 1 car load a day; and carry the largest stock and greatest variety of everything needed in the apiary, assuring best goods at the lowest prices, and prompt shipment.

Illustrated Catalog, 72 Pages, Free.

We also manufacture TANKS of either wood or galvanized steel, all sizes, any form, and for all purposes. Price-list Free. Address,

E. KRETCHMER, Red Oak, Iowa.

8E13t Please mention the American Bee Journal when writing.

honey. Have you ever had a sample of it? I thought I would be able to send you a sample of it this year, but I do not think I can, from the way it is looking. All the cry around here is for manzanita. It is the finest honey we get here.

I wish Prof. A. J. Cook could have seen our cattle eat sweet clover last summer; they would leave everything else for the clover. W. A. PELLEW.

Nevada Co., Calif., Feb. 27.

[No, we have never seen any manzanita honey, as we remember. We should be pleased to taste it.—EDITOR.]

Wintering in Sheds.

I placed in winter quarters, in December, 1896, 15 colonies. I lost two in wintering, and to the 13 I added 4 colonies by purchase, making 17 in all. These I increast to 38, and produced 2,300 pounds of first-class comb honey. Not having a suitable cellar, I have wintered my bees in common board sheds with double horizontal doors opening toward the south. In warm days I open the doors and let the bees fly. At present they seem to be in good condition.

C. A. STEWART.

Kane Co., Ill., Feb. 21.

Section-Cleaners—Wintering Well.

Referring to page 147, why does not Mr. Golden use a continuous belt instead of a gear? Gearing always runs harder, and with more jar and noise.

I think the American Bee Journal is all right. We were introduced in January, 1898, and I am always at the post-office Thursday mornings, and have not failed as yet to get it on that date.

My bees are wintering finely. They have had two flights this week, and our prospects here are for an early spring and a good honey-flow. GEO. O. MORRIS.

Bureau Co., Ill., March 11.

Another Bachelor Bee-Keeper.

The answer to the question askt by a bachelor information seeker of Tennessee, on page 155, is so good that I think it will stand referring to once more. We have a bright-eyed girl in our neighborhood that soils her slender hands washing dishes. But a bachelor bee-keeper walks 1¾ miles nearly every evening in the week to help her, for the sunshine of affection he receives. Would she wash those dishes in less time by herself? SUBSCRIBER.

Acton, Calif.

[Certainly, if the bachelor bee-keeper tried to help her *wash* the dishes, the bright-eyed girl could do it in less time alone. But if he did nothing else but wipe them while she washt them, of course the two ought to get through sooner.—EDITOR.]

Bees Under Snow.

This has been the snowiest winter I have known here, and bees have had fewer flights than in any winter before since I have kept bees. Mine are all on the summer stands, and were flying freely from all hives about Feb. 9 and 10.

It may not be out of the way to give utterance here to a word of caution about leaving entrances to hives clogged with snow. I notice that some bee-keepers are inclined to take considerable risk in this

Excelsior Incubator and Brooder Cheap....

200 eggs capacity. Good as new. Used for only two hatches. Everything complete. Will sell it for **TWENTY DOLLARS,** half the cost price. Address, **P. W. DUNNE,**
River Forest, Cook Co., Ill.

Texas Queens

Best honey-gathering strain in America. Tested, $1.50. Untested, $1.00. Write for a Circular. **J. D. GIVENS, Lisbon, Tex.**

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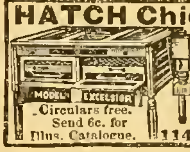

HATCH Chickens BY STEAM— With the **MODEL EXCELSIOR Incubator**

Simple, Perfect, Self-Regulating. Thousands in successful operation. **Lowest priced first-class Hatcher made.**

GEO. H. STAHL,
114 to 122 S. 6th St. Quincy, Ill.

Circulars free. Send 6c. for Illus. Catalogue.

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BEE-KEEPERS' SUPPLIES!

Largest and Best equipt Factory in the

SOUTH-WEST.

Send for Catalog.

FRED A. DALTON,
1A26t WALKER, Vernon Co., Mo.

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Is Rearing Queens in Cameron Texas,

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I DEFY competition in Foundation
Millions of Sections—Polisht on both Sides!!
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Save freight and get orders filled at once. Also as fine a strain of 3 and 4-banded Italian Bees as ever gathered honey.
Full 8-frame colonies, $6.00; 3-frame nucleus, $2.75.
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12Atf Mention the American Bee Journal.

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Address, Leahy Manufacturing Company, **Higginsville, Mo.,** or **1730 South 13th St., Omaha, Neb.**

direction. I have had to clear the entrances many times this winter. Once when there was a snowfall of two days I cleared them two or three times; and sometimes found the bees of strong colonies crowded against the snow at the opening, as if suffering for want of air.

Decatur Co., Iowa. EDWIN BEVINS.

A Correction—Wintered Well.

I want to make a correction: On page 166, where it says six years it should have been 36, when sweet clover was sown in our town and spread out on the roads.

I have taken the bees out the cellar. All colonies are good and strong, and have workt two days on the maple blossoms.

Will Co., Ill., March 19. C. SCHRIER.

Honey-Dew.

Bees have been working on willows for over 40 days, and as the fruit-trees are commencing to bloom now they ought to be in good condition for a harvest if this year is not too dry.

If honey-dew comes from Heaven, it's a pretty small one, for I have watcht it fall and saw that it comes from the aphides. Last summer, on some low willows where I could see them easily, I saw the aphides in small clusters on different limbs, and they exuded (especially if disturbed) small drops of a clear, sweet liquid. Where it fell on the limbs it was turned dark and was gummy. Bees and other insects were working on it at the time. I have seen bees working on oak trees the same as on those willows, but I didn't investigate closely.

Sacramento Co., Calif., Feb. 24.

Money in Doubling-Up Colonies.

Five reasons why I double up.

1. To strengthen the colonies.
2. To get more honey.
3. To do away with old queens.
4. To do away with old combs.
5. To prevent increase.

It is better to double up in a honey-flow. Double up late in the evening when all the bees are at home.

To unite No. 2 and No. 4, take the cover off of No. 4, smoke them well, then puff some smoke in at the entrance of No. 2, then pull No. 2 from the bottom-board and set it on No. 4, and puff smoke in at the entrance of No. 4, and they will not fight much. In 5 or 10 minutes give them a little more smoke. You will find this works like a charm. Smoke them well.

I do not use any paper between the hives, nor kill one queen. I let the bees manage that, unless I want to save one.

No. 2 weak old queen, and old combs; and No. 4 good combs. Unite them, get rid of one old queen, old combs strengthen No. 4, and get 30 pounds of extracted honey to nothing. Good. Or, if No. 2 has good combs, let it stay on until there is a swarm, then smoke all the bees down out of the top hive, take it off and put the swarm in it. The swarm then has combs, brood honey and pollen. B. A. ARMOR.

Murray Co., Ga.

Wedges vs. Blocks for Raising Hives.

On page 123, answering South Africa, Dr. Miller says: "The only objection I remember to have seen urged against this [setting hives on four blocks, one under each corner], is that the bees have only the four corners to climb up." Well, here is my objection, or rather my objections:

First, I want my bees all to use for going and coming one side or end of each hive only. Then you know where to look for the queen when they swarm; and more, you have three sides of the hive for pleasure and practical everyday operations, and you are out of each other's way, and so may live in peace and harmony together.

Another reason, and a strong one it is in my mind, why I prefer the wedges to blocks, is because the wedges afford *climbers that direct the bees to go just where they are wanted with their loads.* Of course, the bees, tho the hive be set on four blocks, will get up, but my bees so fixt fail to go up *just where I want them to go up.* There is much in that, that the future will see.

But I cheerfully confess that on very hot days I would like to have a free passage right through under the bees.

Years ago I cut a hole of about 20 inches through the rear end of the floor and covered it with wire-cloth. This I closed when necessary with a slide on the underside of the floor, but the wire-cloth would be so persistently and completely closed with propolis, that I gave up that form of ventilation. All considered, I place a high value upon the use of the wedges. Almost always they afford ample ventilation with my hive. S. T. PETTIT.

Ontario, Canada.

The "Golden" Management.

I read with much interest the articles by Mr. Golden, but one thing I don't understand, that is, when he hives a swarm in supers and places the parent hive on the supers, does he put a cover on the supers, and place the old hive on that cover, or how? If he uses no cover, what keeps the bees from going back into the brood-frames? CLINT BACHTEL.

Modoc Co., Calif.

[Mr. Golden sent us the following reply to the above question.—EDITOR.]

No, no, there must not be anything between the swarm and the parent hive. Do not be alarmed about the bees going up to the parent hive; only those that are laden with pollen enter that department, and deposit the pollen where the brood and larvæ are, that I have ever discovered. Others seem to have had pollen below, while I have never as yet had a single cell. When bees swarm naturally they know it, and hived in a new house they know it, even if the new and old are joined together they know it, and they know they have had their say in the matter, and are contented if plenty of room is given them; and if the queen-cells are carefully destroyed success is sure to be the result. But side-entrances must be provided, both in the hive and supers.

J. A. GOLDEN.

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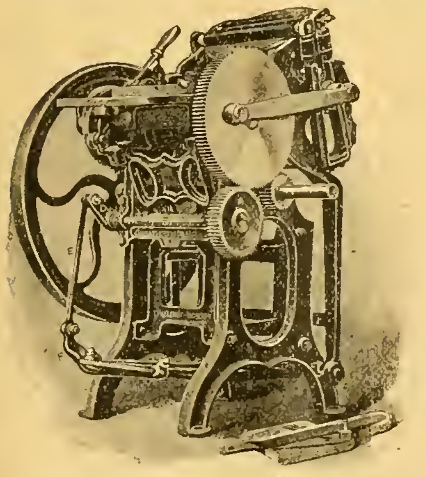

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We have put in a new small Job Printing Press on which to print our own stationery, circulars, etc., and while being able to do this we may as well do some work for our readers, if they will favor us with their orders. If you want Envelopes or Letter Heads, send 2-cent stamp for samples and prices. We will make right prices for neat, good work. All orders can be filled by express, at small charge, as the weight would not be great.

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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Mar. 23.—Very little demand for honey in the comb, the season being about over for its sale in any quantity beyond a case or so at a time, many retailers refusing to carry it in stock owing to sales being infrequent. Prices askt are 10c for best grade of white, 8@9c for No. 1 or fair grade of white; ambers, 7@8c; dark, same. Extracted, 5@6c white; amber, 4@5c; and 4c for dark and buckwheat. Beeswax, 27c.

R. A. BURNETT & CO.

Detroit, March 22.— Fancy white is lower and now quoted at 11c. No. 1, 9@10c; fancy dark, 7@8c; No. 1 dark, 6@7c. Extracted, white, 5@6c; dark, 4@5c. Beeswax in good demand at 26@27c.

There is considerable dark and undesirable honey on commission now, and some of it will be carried over to another season.

M. H. HUNT.

Kansas City, March 21.—Fancy white 1 lbs., 9@10c; No. 1, white, 9c; amber, 8@9c. Extracted, white, 5@5½c; amber, 4@4½c; dark, 4c. Beeswax, 20@22c.

Supply of comb honey is large: demand fair.

C. C. CLEMONS & CO.

Minneapolis, Mar 18.—Honey much more encouraging. Fancy white clover comb is selling here now at 10½@11½c. Not advisable to ship darker than amber. Extracted fancy white clover, 5½@6c; amber, 5c; dark, 4@4½c.

Outlook for honey much more encouraging.

S. H. HALL & CO.

Cincinnati, Mar. 21.—Demand fair for extracted, with insufficient supplies. Prices range from 4@6c, according to quality. Demand for comb is slow at 10@13c for best white. Beeswax in good demand at 20@25c for good to choice yellow.

CHAS. F. MUTH & SON.

Indianapolis, March 24.—Fancy white, 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand. WALTER S. POUDER.

San Francisco, Mar. 16.—White comb, 8@9½c; amber 5@6c; extracted, white, 4½@5c; light amber, 4¾@4½c. Beeswax, 24@27c

The firm tone last noted as prevailing in the market for extracted honey continues to be experienced, with light stocks of all grades. The same condition is reported as existing in the East and in Europe. Comb honey is still in more than ample supply for current requirements, having to depend wholly on local customs.

Milwaukee, March 8. — Fancy, 11 to 12c.; A No 1, 10 to 11c.; No. 1, 10 to 10½c.; No. 2, 9 to 10c.; amber and dark, 7 to 8c. Extracted, in barrels, kegs and cans, white, 5 to 6c.: dark, 4½ to 5c. Beeswax, 25 to 27c.

We are able to report an improved demand for fancy honey during the past few days, while the medium grades have also sold better, yet the surest sale is on the BEST. The supply continues equal to the demand, but the fancy grades are not in as good supply as the low and medium, which goes to prove that the fancy sells best—and the values better

A. V. BISHOP & CO.

Buffalo, March 11. — There is a good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

New York, Feb. 9. — There has been a fair demand for comb honey of late, and we are gradually reducing our stock. Fancy white is scarce and finding ready sale at 10 to 11c; off grades white and amber, 8 to 9c.; mixt and buckwheat, 6c. Extracted is in fair demand—California white, 5½c; light amber, 5c.; white clover and basswood, 4¾ to 5c.; buckwheat, 4c.; Southern, 50c. a gallon. Beeswax is steady at 26 to 27c.

Cleveland, Feb. 22. — Fancy white, 12 to 13c.; No. 1, 11 to 12c.; No. 1 amber, 9 to 10c. Extracted, white, 6 to 6½c.; amber, 4 to 5c. Beeswax, 22 to 25c.

A. B. WILLIAMS & CO.

St. Louis, Feb. 9.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c Beeswax, 20 to 22c.

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10A6t Please mention the Bee Journal.

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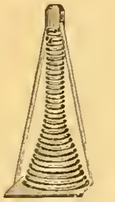
Queen-Clipping Device Free

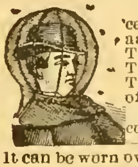


The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 30 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

A $1.00 Bee-Veil Free.

Globe Bee Veil

By Mail for One Dollar.



Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.

It is easily put together and folds compactly in a case, 1x6x7 inches, —the whole weighing but 5 ounces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn in bed without discomfort. It is a boon to any one whom flies bother, mosquitos bite, or bees sting.

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Colorado.—The spring meeting of the Colorado State Bee-Keepers' Association will be held Wednesday, April 13, 1898, in room 33, second floor of the Capitol Building, in Denver. Every person interested in bee-culture is cordially invited to be present.

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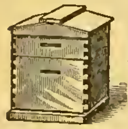

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38th Year. CHICAGO, ILL., APRIL 14, 1898. No. 15.

CONTRIBUTED ARTICLES

Plain Sections—No-Drip Cases—Paraffine Paper.

BY F. L. THOMPSON.

One is tempted to employ emphatic language on observing the various changes being contemplated in bee-supplies; not because they are changes (that would be narrow-minded), but because some of them are expensive. Honey has been steadily going down in price; supplies have not, and will be even more expensive if one wants to keep up with the times. I contend that a legitimate and sorely-needed field of inventive energy is in danger of being overlookt, namely, How to keep the price of supplies in just proportion to the price of honey.

It is stated that a higher price will be obtained for honey produced by the new methods. This is undoubtedly true in some few localities, according to reports. That it is in the majority I am not prepared to admit. From what I have experienced and heard of the Denver market, I should expect to gain nothing whatever by the use of plain sections. Even as far east as Vermont, it appears that plain sections of honey bring no more in the market, according to the testimony of Mr. Crane, in the January Review. We are therefore confronted at the start with the probability that the majority of bee-keepers will gain nothing, in direct cash value, by changing.

Plain sections require less work in their manufacture; therefore, they ought to be sold for less. In fact, Mr. Aspinwall, in the Review, says his plain sections cost him less than the ordinary kind. But it appears it is not to be so in the general market, according to a catalog of a large supply firm, which quotes them at the same prices as the ordinary kind. This is not right.

Then the "fences" are $1.00 to $1.50 a hundred, according to style. Compare such prices with 40 and 60 cents a hundred, the prices of ordinary separators.

Shipping-cases have not followed honey down in price. But why not? As long as the exterior is attractive, *i. e.*, smooth and accurately cut, I think it would really pay me in the long run, taking everything into consideration, to use a case of workmanship and material no superior than should be expected for 10 cents, while acknowledging the excellence of the 15-cent ones.

In regard to shipping-cases, one vital point has been overlookt. Time is money. It takes more time to nail up several hundred no-drip cases than it used to when they were of the old style. The paper has to be cut and inserted, and five little strips nailed in each one. I am not condemning the no-drip style, but would like to have it without so much expenditure. After all, the old style cases are not so bad, when bottom starters are used, and the honey shipt in such quantities as to admit of making a regular pile in one end of a car, with straw all around, and boards in front. It is a question whether under such circumstances it really pays to use the new style at all.

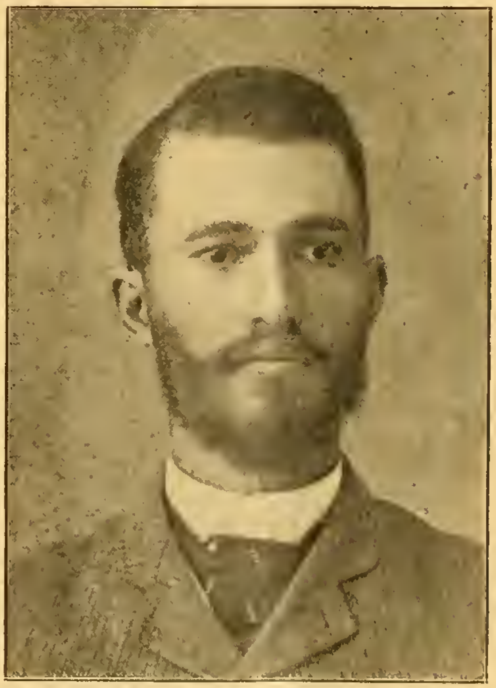
But this is not all. We are now told that progressive bee-keepers use thin strips of veneer between the rows of sections in the shipping-cases. These are $2.00 a thousand—another expense.

And perhaps still more, it is hinted that shipping-cases, as well as supers, ought to have followers and wedges. Great Scott!!

PARAFFINE PAPER AGAIN.

I don't see why this should be made a subject of controversy. It is a question of facts. My bees deposit propolis on the paper, tho tightly cushioned and warmly packt. If others' bees don't, I congratulate them, and wish mine wouldn't. But they do.

There are two other disadvantages of the paper, not mentioned before. One is, that it makes it so undesirable to inspect the supers from above, to see when it requires tiering up or taking off, that one is forced to resort to the comparatively clumsy and tiresome method of prying it up, inspecting from below, then setting it down with the care which the presence of the bees on the edges nearly always necessitates.



F. L. Thompson.

The other is, that the advantage it gives of securing sections with tops perfectly bright and fresh, only applies to one super on a hive during the season. The others, having served to tier up, will have the tops of the sections as dingy as by the ordinary plan of a "layer of air."

No doubt it is a neat and effective aid, tho not an indispensable one in small apiaries; but in large apiaries, if one wants to accomplish the same objects, it can be done with a greater saving of time and money by returning to the old plan of wide frames—single-tier ones, of course—with anything one wants on top for warmth. Last season I used one set of double-tier wide frames. The results were all that could be desired, as far as the sections were concerned.

Montrose Co., Colo.

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Some Southern California Notes.

BY PROF. A. J. COOK.

DRY SEASON.—Southern California is experiencing an exceptionally dry season. This place, which stands higher than most sections, has had only about eight inches. The season is now so far advanced that little more can be expected. As about 15 inches is necessary for a full honey crop, the outlook is not encouraging. Already the bees have stored some from fruit-bloom, eucalyptus and the early-blooming buckthorns, which will help to feed the bees, tho unless a goodly supply was left in the hives last year, many colonies will surely starve to death.

INTELLIGENCE IN BEES.—Speaking of intelligence among bees—is it possible that bees sense the unfavorable seasons, and are rendered cross by the outlook? Bees are unusually cross this spring. A young lady, who has kept bees for three years with no trouble, finds them so provokingly petulant and irritable this season that she contemplates disposing of them. She says that they are too much for both veil and smoker. She has never had such trouble before; and this notwithstanding that she has secured considerable honey during the last weeks.

COUNTY ASSOCIATIONS.—The Central California Bee-Keepers' Association, consisting of Kern, Kings, Tulare, and Fresno counties, is likely to break up and each county form a separate association. As there are enough bee-keepers in each county for a good association, this seems wise, especially as the railroad fares are very high in that region.

STORING HONEY.—There are reports that considerable honey has been stored already, notwithstanding the limited rainfall. The flowers are out very early this season, and the citrus trees and buckthorns are crowded with bees.

SHIPPING HONEY TO ENGLAND.—It is reported that four carloads of honey were shipt enroute for London, England, from San Diego county last month.

MANZANITA AND BUCKTHORNS.—It is reported from San Diego that the black manzanita and buckthorns are in blossom very early this season, and the bees are securing not a little honey from them. The same is also true of the later plants and the wild pea all over Southern California.

Los Angeles Co., Calif., March 29.

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Honey from Pine-Needles—Is it New?

BY D. C. LEACH.

About the first of last October, after the honey-gathering season was over, I noticed one morning my bees were busily at work. They came in as heavily laden as when the basswood is yielding its rich treasures in greatest abundance. They would drop on the alighting-board and on the ground, and stand for a minute or two panting as if their strength had been taxt to the utmost in reaching their hives.

I thought it very strange, but as I was very busy I gave the matter but little attention. I found, however, their activity was kept up all day, and renewed early the next morning. I then concluded that some one had cut a bee-tree in the woods not very far off, and my bees were gathering up the broken and wasted honey.

The third morning, however, they were at it as busily as ever. I knew then that my bee-tree explanation was at fault, for 20 strong colonies of bees, working as mine then were, in a few hours would have gathered every drop of honey that could have been thus spread over the ground. I resolved, therefore, to follow the course of the bees, and, if possible, solve the mystery. The rush and roar was so great that they were easily followed.

After going some 50 or 60 rods I became conscious from the motion and numbers of the bees I was nearing the solution of the mystery. A few rods farther on I entered a grove of young white pines, from 10 to 30 feet high, and then I knew all about it! The needles of those pines were covered with thousands of minute globules of as clear, white, sweet nectar as I ever saw! They glistened in the sunlight like diamonds. All the bee had to do was to alight on a pine-needle and drink her fill!

About four days this unexpected honey harvest continued and then ended as suddenly as it came.

I have kept bees in the immediate vicinity of pines for many years, but never knew a case of this kind before. None of this nectar appeared on the foliage of the Norway or Jack pines in the vicinity. None of the honey gathered from the pines was deposited in the sections, so I cannot speak positively of its quality, but I have no doubt it was as good as the best—if not better! The globules were clear as crystal, in taste the perfection of sweetness, and thicker than first-class syrup.

Is it something new for bees to gather honey from pine-needles? I think I have read of a certain kind of pine on the Pacific Coast that yields a poor quality of honey, but I have never known it to happen in Michigan.

I will add, in conclusion, that I think my bees must have increast their winter stores nearly 200 pounds from that pine grove.

Grand Traverse Co., Mich.

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Exhibiting Bees in a Glass Observatory-Hive.

BY A. F. BROWN.

The following bit of experience is called forth by information askt for on page 39, replying to which Dr. Miller advises keeping the observatory hive covered as much as possible. My experience differs. Nine or ten years ago, when working for a railroad company, I kept a 3-frame observatory hive in one of the windows of the passenger waiting-room of the station at Huntington, Fla., for upwards of three years, and never during the whole time had the light excluded from the bees. I put them there to be seen—to study their habits, and for other people to see, and to do this it was necessary that the bees and their work be in sight all the time; consequently I had no cover or shutters to exclude the light, nothing but the glass, and I assure you the bees never "buzzed themselves to death," but after the first week workt on in their normal condition as if in a hive as dark as Egypt.

I used the Langstroth size of frame, the entrance was at the bottom at one end, then through a tube about 8 feet long, slanting upwards so the bees came out about 6 feet above one's head on the outside of the building, there being a platform or wide veranda, as it were, all around on that side of the station.

The exit-tube was made of strips of laths, size inside about ¾x1¼ inches. I put a small colony of Italian bees into this hive at first, and later on, by changing the queens, had several different kinds of bees—blacks, hybrids, Carniolans, and Holy Lands; in fact, I did everything with this colony of bees that one would do with a full size colony, and I had them right where I could observe all that took place in the work inside a normal colony.

Often I would have only one full comb in the hive, letting the bees build new comb in the other two frames to give me the opportunity to observe the whole work. If allowed to get strong in bees and brood, which they would soon do, they would swarm like any other colony; or if space was given above (on top) by means of an inch hole, and a tumbler turned upside down over it—first attaching a bit of comb or foundation to the bottom of the tumbler—the bees would go up and fill it with honey, and once we got them to work in a bottle inverted over the hole.

Having no wooden shutter or cloth to cover them up, one could watch everything without disturbing the bees in the least. When all three frames were in the hive, and the queen got the inside one filled with brood, she would come over on the outside comb, and one could watch her in her work of depositing eggs, and see the bees feeding her, etc.

The two glass sides of the hive were hung on hinges the same as a door, and often I would open the hive for various purposes, changing the frames about, removing the frames the queen was on, so as to be next to the glass, or some other operation; in such cases quite a few bees would take wing, the same as when a hive is opened out in any apiary.

Well, the interesting part I wish to call attention to is, that when the hive was closed up these bees did not hang around buzzing, trying to get in where they came out, but at once flew out one of the open windows or door, and up to their regular entrance-hole. They knew as well as I did when the glass door was open, or when it was closed.

And now comes more interesting facts. In the three years the bees were kept in the station waiting-room, and the hundreds of times the hive was opened with a dozen or more people looking on, and even handling the bees, only one person, to my knowledge, ever got stung.

A dozen trains a day past within 18 feet of the bees—all the jarring, hustle and life of a regular railroad station, with hundreds of passengers going and coming, and yet the bees lived on peaceably, and increast, prospered, and did well.

At different times, and I might say for the most part of the time, there were all grades of Italian-black hybrids and pure-black bees in that particular observatory hive. But here I should add that with the exception when first putting the bees there, all were reared in the hive, and consequently knew no other life but the one surrounding them. This may also explain why they did not buzz themselves to death on the glass.

I should remark here, that in the case of young bees sometimes starting out for their first flight, they tried at first to get out of the glass, but it did not last long, and they soon learnt the right way, and then always followed it. Also, in case of their throwing off a swarm, which happened several times, the bees always went out the tube, and none stopt buzzing on the glass inside.

I have found that a single-comb observatory hive is not as good or as instructive as one having two or three combs, for the reasons that the number of bees in a single-comb hive are too small to amount to much in the way of building comb and storing honey, etc., and when you do get it just nice and strong, why, it is but a day or so before it is too strong—at least somehow I never got satisfactory results from them, and I have had bees in one for a year, and several times for a few months; but with a two or three frame hive you have something that one can gain much information from.

Then don't have shutters or covering of any kind over the glass. Let the bees be in the light all the while, and then when you wish to examine them or watch their work you don't throw them in an unnatural condition, as you do when you have them in a dark hive, and only give them light when you wish to watch their movements.

Do not put them in a sunny window, unless the hive is well back inside, and the ends of the frames face the window; and this is the proper way they should face, so that one can get to examine both sides of the hive inside the room. I would rather keep them on the north side of the house, or in a room that had a veranda outside, so that the sun could not shine on the combs through the glass.

The ideal spot, in my estimation, for an observatory hive, is on a shady veranda. Then when the hive is opened there are no bees flying around inside the room. The entrance can be through a tube running off near the roof, and thus have the flying bees out of the way; and one can sit and watch the hive for hours. There is much of interest to be noted from a small colony of bees kept thus. Volusia Co., Fla.

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Section-Cleaners—Producing Fancy Honey.

BY JAMES CORMAC.

There has been considerable publisht in the bee-papers on the subject of cleaning sections of propolis stains, and on page 33 is shown a machine offered by J. A. Golden for that purpose. The half-tone is a good one, and the eyes of the operator say, "Now, you see, this works like a charm." The charm of the young lady in the half-tone (to me) is more charming than the machine, because I think I see in the illustration a young lady who is not ashamed to allow her position before the machine to be understood that she is a helper in the affairs of the household and its income, and not given to be waited on, while many others pass their time with yellow-covered novels.

But my admiration does not go far enough to construct a machine for the purpose shown, because I think I know that one can produce comb honey without having it daubed with bee-glue. A bee never ought to be allowed to travel on the upper side of a section. Something ought to intervene between the upper surface of the sections and the hive-cover or another super. I have tried paper, waxt, paraffined, etc., which allows the bees to raise the edges thereof, piling up glue superabundantly at their option, which paper prevents a free passage to the super or supers.

Four years ago, with pattern-slats (section-holders) of two inches in width for sections 1⅞ wide, laid on top of the sections and held in place by a 3/16 strip ½ inch wide laid across in the center of the super, the super made ⅜ deeper by nailing a strip all around the upper edge of the super, would effectually prevent the smearing of sections unless the weight of honey therein bent the lower set of section-holders. To prevent this, another strip the thickness of the space between the lower holders and brood-frames, placed in the center across the frames, kept all level and tight. My brood-frames being ⅞ thick, would not bend down and allow the heavy sections to settle.

You do not need to scrape the sections; they will come out of the super as clean as put in, except the edges touching the separator and the inset.

In cleaning the edges I use a thumb-plane. A narrow box has a strip four inches wide nailed across it, through which a hole is bored, also directly under this hole one through the bottom of the box ¾ inch large. A small box ¼ inch larger than the section, and ⅛ inch lower than the section, with inset cut out ⅛, as the one in the section. Fasten a wooden pin in the bottom of this last box to go through the hole in the cross piece of the large box and through the bottom of the same. This last box will turn on the pin. Lay the section in, give the plane a curving sweep from the corner of the inset up the straight edge to the corner of the other inset. A thin shaving is removed from the section. Turn the box and use the other side likewise. This removes all soiled wood. A knife with a notch ⅛ deep on the square end of the blade, drawn across the inset, cleans that.

In using sand-paper the dust of the section would often catch the honey in the uncapt cells and injure the appearance.

The production of fancy honey demands as much fineness as any undertaking I ever engaged in. There are many ways used to accomplish a certain end, and if others give their experience one can cull and be greatly helpt.

The "Solomon" of Marengo does the American Bee Journal "proud," as the boys say. It is a grand addition for the beginner—the department of "Questions and Answers."

Our winter's snow lying so long on the ground, after being parcht with drouth and heat last fall, gives token of another season favorable to a good yield of nectar from white clover, as it is increasing in rootlets. Should the coming spring be favorable in temperature, with plenty of ozone in the atmosphere, we may expect a good harvest. Polk Co., Iowa.

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The Loco-Plant and the Bees.

BY I. W. BECKWITH.

Three years ago I brought several colonies of bees to this vicinity, and the next spring they workt well on the wild flowers, which were abundant till about the middle of May, when they all stopt work entirely, and from that time during the summer I scarcely saw a loaded bee enter a hive.

In the fall I rendered a quantity of comb that I had on hand into wax, and to my astonishment not a single bee came into the house, which I kept open while the wax was cooking. I encouraged breeding that fall and the next spring as much as I could, yet they dwindled away till there were but few left.

In the spring they again workt well till the middle of May, when they "struck" again, taking no notice of exposed honey or melted wax. I told a neighbor, J. L. S. Jackson, how my bees had acted, and he said he thought they were locoed by using honey gathered from the loco-plant, which is very abundant in the immediate vicinity where I kept my bees.

For the benefit of those who never heard of the loco, I will say that it is a leguminous plant that grows on the arid plains of the Western States. When an animal eats leaves or roots of the plant—some say the root only—the brain becomes affected so that the animal loses its reason to a greater or less extent, and in severe cases it perishes, apparently because it does not have sufficient reason to go to water and otherwise take care of itself.

I thought Mr. Jackson was mistaken about the cause of my bees' actions, and having lost all my bees, I bought some more about a year ago, and they behaved during the past season just as the others had done—that is, they workt all right in the spring till the loco had been in bloom a short time, when they quit work, were quite irritable, and their conduct was generally different from other bees. The few young that they reared on honey that they already had in store (they quit work before they had stored much loco honey) seem to be all right.

If anybody else has had similar experience I would be very glad to have him report through the American Bee Journal.

Weld Co., Colo.

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☞ See "Bee-Keeper's Guide" offer on page 205.

American Bee Journal and Spelling Reform.

BY C. P. DADANT.

FRIEND YORK:—I wish to digress a little from the bee-talk to-day to have my say in regard to the new way of spelling that you have introduced in the columns of the American Bee Journal, as I notice some comments upon it by your different contributors.

This new spelling is certainly offensive to the eye before we become accustomed to it. In the beginning, I used to do as Mr. Jenkins remarks—it used to detract my attention from the subject in question. But one evidently gets used to this, for I no longer notice it, altho the American Bee Journal is, I believe, the only paper that we take which follows this reform.

The greatest objection to the spelling reforms, such as this, come from people who are good scholars, and who object very often on the ground that if we make reforms on this subject it will become impossible to recognize an educated person from an uneducated one, since every one can write just as he talks. This argument is not well founded. If the reform is brought about in the right way, it will bear only, as with your method, on such parts of speech as will have been agreed upon, and it will require rather more of an education than less for writers to keep informed upon these changes.

I am free to confess that, altho I approve of the change, it would be next to impossible for me to follow this orthography from mere slavery to habit. I would have to drill myself very carefully for quite awhile in order to do away in my handwriting with the old way of spelling. But because we are accustomed to a bad way should we discourage those who are faithfully trying to educate the young generation to better ways? Let the old fogies, like myself, stick to their old ways if they cannot do otherwise, but let not any of them ridicule the progressive man who tries to bring forward something better. Otherwise we might as well go back to the English method of spelling labour, neighbour, and borough instead of neighbor, labor, and boro. "Plow" is surely a progress on "plough," tho it means the same. If we are a progressive nation, why should our progress be all material and not educational and mental? Why should we cling to the old way of spelling any more than to the scythe and the cradle? Is the man who writes his name "*Ztschmidztsch*" any brighter or more successful than plain "*Smith.*" Perhaps you will think this name is of my own invention, but not so. I believe the man was a Russian, and I have actually received a letter signed as above.

It is not only in spelling that we might help the reform which is so slowly going on in scientific circles for the purpose of making education easier, but in many other lines. We lose sight of the fact that while our children are overcoming the difficulties of the language, they are uselessly losing precious time, which, in this age of progress, might be occupied much more to their benefit. But language is only a small portion of what has to be learnt by a child to acquire an education. What about figures? Why do we so long cling to the ridiculous English system of weights and measures when we have within our reach the most simple system that may de devised —the metric system? Our scientists have long ago decided that the metric system was the only rational system of weights and measures, and as far as they have been able they have drawn us in this direction. But we have too many old fogies who are afraid that a change might disturb their own equilibrium. Better have the *rods* and the *ells*, *Flemish* and *English*, and the *yards* and the *feet*, carefully divided into *12ths*, which are themselves divided into *eighths* and *sixteenths* so as to make (so it would seem) computations as difficult as possible! Imagine the United States leaving the decimal dollar to go back to the pound sterling containing 20 shillings, subdivided into 12 pence!!

All these reforms frighten us. Why? Because we make a bugbear of nothing. We have been accustomed to our rut, and the deeper it is the better we like it, for we think the world is all at the bottom of that rut. But with a little effort we will ascend to the top, and with what profound disgust we will then look back into that pit! At any rate, if we have not the courage to climb out we must not try to discourage those who are climbing, or to pull back *in* those who have got out.

The teacher up-to-date has no hesitancy. He says that the spelling reform is but a trifle. He does not frighten at the half-dozen strange words of the metric system, and soon discovers that those few words contain the key to a method which is simplicity itself. He quickly decides that it is better to have the freezing-point at zero than at 32, and boiling water at 100 than at 212. Progress is made of little things. Then let us try to help it. Hancock Co., Ill.

CONVENTION PROCEEDINGS

Report of Vermont Bee-Keepers' Convention.

BY M. F. CRAM.

The 23rd annual convention of the Vermont Bee-Keepers' Association was held at Burlington, Jan. 26 and 27, 1898.

The meeting was called to order by Pres. H. W. Scott, prayer offered by R. H. Holmes, and then the minutes of last meeting read and approved. The following committees were appointed on Resolutions: J. E. Crane, R. H. Holmes and M. A. Everest; on Nominations, M. F. Cram, H. L. Leonard, and O. J. Lowrey.

The Secretary's and Treasurer's reports were read and approved, the former's report showing a balance of $5.00 in favor of the Association.

COMPARATIVE VALUE OF RACES OF BEES.

Then came an address by Pres. H. W. Scott, after which R. H. Holmes talkt on the comparative value of the Italian and black races of bees. He thought not many of the original black bees were left in the State—they were now Italians and hybrids; each colony showed different characteristics, as much as horses or cattle. The Italians come out ahead on the following points: Gather honey faster; better to defend the combs from moths; better to defend their stores; fly farther for honey; in fact, were generally at the front.

Mr. Leonard claimed it was the condition of the colony more than in the breed of the bees, but thought the Italians were better for surplus.

Mr. Crane said that in some seasons the Italians outstript the blacks; in other seasons it was the reverse.

Mr. Holmes then told of the great value of a good queen.

SPRING MANAGEMENT OF BEES.

Mr. Crane gave his method of spring management. First, we must save the heat of the hive by contracting, and seeing that they had plenty of stores; but to begin with we must get the best bees. Bees vary in characteristics, and that is the very best ground we have to make improvements upon, and it could be done the same as in horticulture. He told how the sugar-beet had increast from 6 per cent. to 25 per cent. in productiveness; what is true of plants is also true of the larger animals, fowls and bees. He thought the swarming instinct could be bred out, in a great measure. The large draft horse and the little pony had all sprung from one parent-stock. The dairy cow had been improved, and why not the bee? The Italian had grown much lighter in color since coming to this country in 1860. One point in our favor, we can breed a bee and test its merits in less time than we can our domestic animals, and Mr. Crane thought we could in time breed them up to nearly twice their present productiveness.

A FEW QUESTIONS AND ANSWERS.

QUES.—If bees have been growing better, why do we get less honey than 15 years ago? ANS.—Partly on account of pasturage being cut off, and partly on account of peculiar seasons.

QUES.—Is it any advantage to have hives painted? ANS.—Yes.

QUES.—How can we secure the whitest comb? ANS.—Have your sections on only when honey is coming in.

EVENING SESSION.

Prof. L. R. Jones gave a lecture on the bees and the flowers. He also showed by stereopticon views the pollenization of flowers, and the aid that the bees are to the same, which was very instructive and well illustrated. The question was askt Prof. Jones, if it was any benefit to spray fruit-trees while in bloom. He said no authority in the United States had ever given out that spraying in bloom had ever given as good results as spraying *after* the bloom had fallen, and many bad results had been obtained from spraying while in bloom.

Cassius R. Peck then gave a report of the work done at the Experiment Apiary. It was a very concise report, but owing to some peculiarities in the season some parts of the work did not reach the desired object, and will be continued next season.

The convention then listened to a recitation by Albert M. Cram, and two songs by Mr. Everest.

THE QUESTION-BOX.

Ques.—What is the value of bee-escapes? They were spoken of favorably by Messrs. Fassett, Lowrey, Leonard, and Holmes.

Ques.—Is there danger of over-stocking?

Ans.—Apiaries should be from 3 to 5 miles apart, or farther. Bees will fly from 5 to 7 miles from home, and in California, where big stories originate, bees have been known to fly much farther.—[We fear this is mostly a "big story."—Editor.]

SECOND DAY.

The committee on Nominations reported as follows, which report was approved:

President, R. H. Holmes; Vice-Presidents, J. E. Crane, for Addison Co.; Cassius R. Peck, for Chittenden; Geo. H. Terrell, for Lamoille; P. W. Smith, for Orange; V. N. Forbes, for Rutland.

Secretary, M. F. Cram, of West Brookfield; and Treasurer, H. L. Leonard.

The committee on Resolutions reported as follows, which report was also approved:

Resolved, That we express our thanks to the proprietor of the Van Ness House for the use of a room for our annual meeting; also to the railroads of the State for reduced rates to members attending this meeting.

Resolved, That we tender our thanks to the Board of Control of the Vermont Experiment Station, for the interest they have taken in our pursuit, and also for experiments made at the station.

Resolved, That we express our thanks to Prof. L. R. Jones, for his able and interesting lecture upon the agency of insects in the fertilization of flowers.

Whereas, An all-wise Providence has seen fit to remove our associate, J. W. Smith, from this present life, therefore, be it

Resolved, That we recognize amid the busy cares of the world, the frailty of human life, and the necessity of living with a wise reference to the life beyond the present.

Resolved, That we tender our heartfelt sympathy to the family and friends of the deceast in this our loss and their sad bereavement.

J. E. Crane,
R. H. Holmes, } *Com.*
M. A. Everest,

BEE-KEEPERS' EXCHANGE FOR VERMONT.

Would it be practical for Vermont bee-keepers to organize a bee-keepers' exchange?

Mr. Crane said if apiarists would combine they might do so, but he did not know as that could be done in a general way at present. He thought a good trade could be workt up by a canvas with honey; that a good agent could sell large quantities at paying prices.

Mr. Lowrey said if you show the people a nice article they will buy, but the point is to sell in large quantities. He thought Vermont led the world in quality, and we ought to have the best prices. He also thought it could be sent by the carload, send a man with it to sell it, and we would get what it was worth.

Mr. Leonard then spoke of the California Exchange. Mr. Everest mentioned the building up of a trade, which every one had got to do.

The following committee was then appointed to confer with the Board of Control in regard to the work to be done at the Experiment Apiary the coming year: O. J. Lowrey, H. L. Leonard, and M. F. Cram.

WEED PROCESS FOUNDATION WINS.

Then came reports of members who had used new kinds of foundation. Mr. Lowrey showed three different specimens which the bees had drawn out and filled with honey, each section having a private mark known to Mr. Lowrey. A committee was then chosen to sample the honey, which they did to their great satisfaction. Weed's new process carried off the honors.

MANAGING SWARMING IN OUT-APIARIES.

Ques.—Can an out-apiary run for comb honey be made profitable with no one to hive swarms? Ans.—Yes, if tended by an experienced man.

Mr. Crane than gave his method. Commence the middle of May, clip all queens' wings, and go over them once in eight or nine days, and if preparing two swarms remove the queen if found. If not cut all queen-cells that would hatch in eight days. Eight days later cut all queen-cells, and introduce a virgin queen, and eight days later see that she is laying. Cutting just the cells sometimes will stop their swarming.

Mr. Lowrey had used traps, and was successful in keeping the bees from absconding. He had used a double hive and could give ventilation with that. He sometimes took away the brood and let them re-queen themselves on another stand.

The new no-bee-way section and fence were then spoken of by Mr. Leonard, who told of the benefits he thought were in them. He thought he would prefer the fence with holes instead of cleats.

All thought the honey season was a poor one in Vermont last year.

There was a good attendance at the convention, and two of the oldest members of the Association said they thought it was the best meeting they ever attended in the State.

M. F. Cram, *Sec.*

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Raising the Hive for Ventilation.

In putting blocks under the four corners of the hive to give ventilation in summer, is there not danger of raising the bottom of the brood-frames too high off the bottom-board, which might be a detriment? or do you think that would do no harm?

Indiana.

Answer.—I have had no trouble from that source. The only trouble likely to happen is that raised too high the bees would build comb to the bottom-bars, which could easily be trimmed off.

Cyprian Bees, Italians and Blacks.

Are the Cyprian bees any better honey-gatherers than the Italians? Will they sting when one goes into the yard, unless their hive is opened? Do you think that black bees are any better honey-gatherers than the Italians? Where can I get a Cyprian queen?

N. H.

Answer.—Cyprians have the reputation of being regular savages, stinging with or without provocation. Some claim that a slight admixture of Cyprian blood improves Italians as to working qualities, while others say it's only because of the introduction of fresh blood. The fact that Italians are preferred by nearly all who work chiefly for honey is good evidence that neither blacks nor Cyprians are as good. It is somewhat doubtful if any one has Cyprian queens in this country; at any rate I don't know of any.

Combs Breaking When Extracting.

In my limited experience in extracting I did almost nothing at all because the combs would break down so badly. I finally gave up, and used the honey as "chunk honey." I had full-depth Hoffman frames and wired horizontally medium brood foundation. A bee-keeper 35 miles east of me reports the same trouble. Now then, how can the combs be prevented from breaking down while extracting?

Oregon.

Answer.—One way is to let the combs get to be ten years old before extracting from them. Not highly recommended, however. But that's another way of saying that you must be very careful with new and tender combs. The heavier they are the more danger of breaking. So go about it in this way: When you first put a pair of combs in the extractor, turn no faster than is absolutely necessary to set the honey to flying out of the cells. When half or more of the honey is still left in the cells of that side, reverse the combs and empty most of the honey in the other side. Not much more than half of it, however. Now extract pretty closely from the first side, then from the second. In that way you can extract from very tender combs without breaking. It will take less force to extract when the combs are warm from the hive than when the honey has become cool.

Moisture in the Hive—Hive-Entrances, Etc.

1. One of my neighbors has a colony of bees in frames smaller than the Langstroth—and in a box made to fit the frames. This box has a permanent bottom and an entrance not over four inches long. Some time ago he noticed honey running out at the entrance, and called my attention to it. We lookt into the hive and

at one side honey seemed to be oozing out of the comb. It did not seem sour, either. What was the cause of it? The bees seem to be wintering all right. I warned him against robber bees.

2. Do you think there is any danger with so small an entrance?

3. Would he not better transfer into a standard frame hive when fruit-bloom comes? IOWA.

ANSWER.—1. I think it more than likely that what you saw was the moisture from the bees settling on the sealed combs and on the sides of the hive. Sometimes it runs in a stream out of the entrance, especially if the entrance is so small that there is little chance for the vapor to pass out. It is possible, however, that the moisture has settled on the unsealed honey to such an extent as to thin it and make it run out of the combs, and even to work into the sealed honey so as to make it ooze through the cappings.

2. Probably a larger entrance would have been better, but now that activity has commenced, it may be well enough to let the entrance remain small till the weather gets warmer.

3. If he doesn't intend to handle the frames, or intends to handle them very little, it may be well enough to leave things as they are, otherwise he might do well to transfer three weeks after swarming.

Queen in Observatory Hive.

I have saved over a young queen. I have had her in an observatory hive in the house all winter, and given an occasional flight. She has a hundred or so of attendants. If I don't need her for a queenless colony, can I give her more bees by moving a colony and setting a hive with this queen in its place? I mean will they fight her? NEBRASKA.

ANSWER.—If honey is coming in plentifully it will likely work all right; otherwise not.

Using Combs from a Worm-Killed Colony.

Last fall I lost 2 or 3 weak colonies by starvation, and then worms. After the bees all disappeared I brimstoned the combs and killed the worms. The combs seem to be all right with the exception of the webbing left by the worms. Will it do to give these combs to bees in swarming-time? SUBSCRIBER.

ANSWER.—Yes, it will be all right, especially if the combs have been where they were frozen, for freezing kills the wax-worms, altho possibly the eggs may stand freezing. At any rate, even if there should be a few worms present, a colony of bees strong and healthy enough to swarm would make short work of cleaning them out. But you better keep a little watch, or the worms may use them up before swarming-time. Either keep them where the moth will not get at them, shut up tight or in a cool cellar, or brimstone them as often as you find signs of worms.

Wants to Increase and Italianize.

I have two good colonies of bees with plenty of honey on Langstroth frames, which I find will fit the dovetailed hives. These two colonies seem to be doing well, and are quite populous, having gone through the winter in the cellar without losing as much as a handful of bees. The stock was said to be Italians, but from what I can learn they are only blacks or hybrids. I would like to increase them, and at the same time Italianize them. Would you advise purchasing Italian queens now for each colony, introduce them at once, and then about swarming-time divide them into about three colonies? If so, from whom can I best purchase good queens at low prices? Or would you prefer to purchase one tested queen and then form nuclei from her colony after she has been in the hive about five or six weeks? ELMWOOD.

ANSWER.—As there is some danger of failure of introduction, thereby giving a bad set back at a time when it is important to have brood-rearing at its best, perhaps the better plan will be to get the one queen. Those who offer queens in the advertising columns of the Bee Journal are all supposed to be reliable.

A Bunch of Eight Questions.

1. What is the width of the 4½-inch section that you use? and how much honey does it hold?

2. How do you prevent swarming?

3. About how many years are brood-combs fit for use?

4. Would it be advisable to begin to stimulate bees about April 10, so as to get two lots of brood by June 1?

5. Would you think about 70 colonies too many to put in one yard in the spring?

6. In wintering your bees in the cellar how do you prevent the temperature from rising there when it gets quite warm outside?

7. Keeping a select tested queen that you purchase in a nucleus as some advise, is there any danger of them swarming out when she has filled the combs with eggs?

8. What other substance besides wax do bees use in building combs? ILLINOIS.

ANSWERS.—1. The sections I've been using for the past two or three years are 4¼x4¼x1⅞. The amount of honey contained is a a variable quantity, averaging not far from 15 ounces, but sometimes a section will weigh more than a pound and sometimes less than 14 ounces.

2. Bless your heart, who told you I prevented swarming? I try to. and do about everything you've ever read about in the books and papers, but still the bees get the start of me only too often. Abundance of super room seems to be a help, also raising the hive on four blocks nearly an inch. Sometimes queen-cells are carefully cut out, and often that delays swarming. With extracting you can do pretty well at prevention of swarming, but with comb honey it's a tough problem.

3. I don't know. Some of mine must be perhaps 30 years old.

4. Unless you have a good deal of experience you better let stimulative feeding alone, farther than to see that the bees have plenty of stores. Results vary widely, and if you try it at all, better try only part and see how they compare with others.

5. Not in any fairly good region. In some places 10 would be enough and in others 500 might do. Probably few places in your State would stand more than 100.

6. I don't. There isn't any special danger from rise of temperature—the danger is from bad air. At night I open wide the windows and doors, and leave them open as late as I can in the morning.

7. I have never had any trouble in that way. There must be a strong force of bees as well as a crowding of queen to induce swarming.

8. Perhaps little or nothing else in the actual cell-walls, but more or less propolis in making the attachments, and in sealing brood they seem to use bits of pollen and whatever comes handy.

Preventing Second Swarms—Carniolan Bees.

On page 186 we find that Mr. Odle kills the queen when a swarm issues, and at the proper time removes all queen-cells but one, thus securing large crops of honey and a young queen. On the same page we learn that it is not safe to trust to a single queen-cell. Will the following plan work well?

1. When a colony swarms, hive the bees on the old stand, and set the parent colony by its side. Give the new colony two or three frames of brood from the parent hive, and fill up the vacancies in both hives with "dummies." Put on supers and endeavor to get the full force of working-bees to work in them. Before the queen-cells hatch in the parent colony remove it to a new stand, thereby causing the working-bees to go to a new hive, and also preventing a second swarm. After the queen has been fertilized, you may take your choice of the queens and unite into one colony.

2. From what country do we get Carniolan queens? VIRGINIA.

ANSWERS.—That's practically a very common way of preventing second swarms, and a good way. The after uniting might not be so satisfactory, but it might be tried.

2. From Carniola, in Austria.

Moving Bees.

I have 4 colonies of Italians which I sheltered in an out-house all winter, facing southeast, and the bees could fly at their will, as the entrance was open all winter. I put my ear against the hives and heard the buzz throughout the winter. Now that the weather has been pretty good, I have seen them fly, seemingly very busy and in good health. Very few bees I found dead. But the main point which I wish to know at present is this: I intend to move some 20 miles out, and will have to go by wagon.

1. Can I open the hives without doing any harm, say about April 14 or 15?

2. Shall I take out all frames that are sealed?

3. Can they be transported as they are at the present time, or not? Which will be the safest way? NEW JERSEY.

ANSWERS.—1. Yes, if it's warm enough so the bees fly freely.

2. It isn't necessary.

3. Unless the roads are very rough they can go all right probably just as they are. This spring I take nearly 200 colonies to two out-apiaries without doing anything to them at all. They have loose-hanging frames, but the bees glued the frames up pretty well in the fall. The frames are not moved at all to loosen them before hauling. The wagon has springs, and on a smooth road one can trot right along, but on a rough road the driving must be careful. They are loaded so the frames run crosswise of the wagon.

Pollen or Bee-Bread.

At last we have warm, spring weather, and I could not resist the temptation to take a peep into some of my hives, and see what was going on. And I saw—and now I do not see as they have—that is, they forcibly impress me with the feeling that they have not such a thing as a lost art. In plain English, I "got it in the neck," also in the eyes, and various other exposed points. I found that they were breeding but very little, and were almost destitute of bee-bread. I could not find enough in some hives to fill 20 cells, but all have an abundance of honey. I found one of my strongest colonies dead, with about 30 pounds of honey and not one cell of bee-bread. Could that have caused their death?

I have noticed that this colony was very uneasy every warm day this winter—would be flying when other bees were perfectly quiet. They were scattered all through the hive. I found the queen in one of the clusters. I placed a box in the yard with graham flour (I had no rye flour), and before night they were carrying away large quantities of the finest of it on their legs. Will that answer in place of bee-bread or pollen?

Soft maple seems to be about two weeks later than last year. If the bees had been given rye-flour last fall, would they have stored it, and used it this spring for brood-rearing? NEBR.

ANSWER.—I doubt whether the absence of pollen was the cause of death? More likely diarrhea. Graham flour is a good substitute for pollen. Probably any of the grains ground, will do well, and it is all the better to have bran and all—gives a better foothold for the bees. But nothing seems to suit them quite so well as the natural pollen, and when they can get that you will find them deserting any substitute you may have given them. They probably would have stored rye-flour last fall, and yet they were, perhaps, as well off without it. They still had a little pollen, and some have reported that rye-flour stored in the cells became hard and troublesome.

Gathering Honey by Moonlight.

Is there any authority for the statement that bees have been known to gather honey on moonlight nights? NEW YORKER.

ANSWER.—The testimony on this point is not clear. I have some recollection of reading that when linden is in full play, bees will sometimes remain out over night on the trees. This might, and it might not, be accompanied by night work. Bees certainly work nights in the hive, but it might be difficult to find proof that on a moonlight night, a bee leaves the hive and gets back with a load of plunder before the break of day.

Combs Melted and Broken Down—New Union.

1. I had some combs to fall down from the heat last summer. What would you do with such combs? Would it be better for me to cut them out and put in full sheets of foundation?

2. Is there any bee-association? I want to become a member if there is such a thing. IOWA.

ANSWERS.—1. It's probably a toss-up whether you better use them or cut them out. Where there is less than half the comb left, as is probably generally the case, it may be more satisfactory to start with a full sheet of foundation. If the frame is half full of good comb it may be well to save it. If you don't want the bees to build drone-comb in the vacancy, you can cut comb out of one frame and fill in the other.

2. Yes, there's an association that's just the thing for you—the United States Bee-Keepers' Union. Send a dollar to the editor of this paper—George W. York—and become a member to help put down adulteration and to help bee-keepers' interests in general.

Transferring—Queen-Candy.

1. What would be the best way to transfer bees out of five old hives? I have been advised to wait till the bees swarm, and hive the swarm in a new hive. Three weeks later transfer the rest of the bees into another hive. Could I not drive a swarm out of each hive at the swarming season, and get nearly or quite as good results as by waiting till each colony swarms? How do you make queen-candy? NEW JERSEY.

ANSWERS.—1. Of course you can do that way, but in the great majority of cases it will probably not be as well.

2. You probably mean Schulz or Good candy, such as is used when queens are shipt, and sometimes used in feeding bees. Take the very best extracted honey you can get, warm it, but not to any thing like scalding heat, mix with it fine powdered sugar until it makes a stiff dough. Knead in all the sugar you can, working it thoroughly. Let it stand a day or more before using.

A Beginner's Questions.

1. Is there a patent on all the hives that are advertised in the Bee Journal? If so, what is the price of a patent?

2. If there is a patent on the hives, would it be breaking any law to make hives like them for my own use?

3. What is best to do with bees that have worm-nests on the sides of the hives?

4. What is the best plan of handling three or four colonies of bees? BEGINNER.

ANSWERS.—1. A great many hives have been patented, but not many of the hives now in use have patents that are now alive. All movable-comb hives come under the Langstroth patent, but that expired long ago. The price of a patent depends on the seller, and he puts whatever price he pleases on it.

2. If there is a patent on a hive, it would be an infringement for you to make a hive coming under that patent, even for your own use.

3. If the colony is strong it will take care of itself. But it will be a help to scrape off the nests of worms from the side of the hive with a knife or something of the kind.

4. As soon as you are a little accustomed to handling bees you will find it much the best plan to handle them with the bare hands. Rubber gloves are made for beginners, but they are warm, sticky and uncomfortable. Some use a cheap, white glove, perhaps made of hogskin, which has a very rank smell. You ought to have a good bee-book. The publishers of this paper will be glad to furnish it if you will write them.

Ventilator in a Bee-Cellar.

I wish to build a bee-cellar to hold 150 colonies, with a stone arch and a work-shop on top. What is the best way to put in a ventilator? WISCONSIN.

ANSWER.—I have a sub-earth ventilator that runs for several rods four feet or so under ground, so as to bring in air somewhat warmed. It got-stopt up, and last winter didn't work at all. The bees (nearly 300 colonies) wintered well without it, and I'm not sure I'll have it opened up again, for I'm just a little bit suspicious of the quality of the air after it has had a chance to take in possible underground gases. The bees wintered finely, and the only chance for air to get in was through the walls, but there was plenty of chance for it to get out through two chimneys that started from the ground. Probably a chimney or a shaft of any kind to carry up the air will be all you will need.

A City Bee-Keeping Beginner.

I want to begin with one colony. I live in the city, within 900 feet of Brooklyn's largest park, near by a large cemetery, and within a half mile of the open country. My idea is to set the hive on a ledge, shaded, and easily reacht from an upper window.

1. How early can I start my colony?

2. What book or manual goes more into practical details of bee-keeping than Prof. Cook's book?

3. Is my plan feasible?

4. Later on I shall feel perturbed if the bees swarm, which they doubtless will do. My experiment is for study, observation, and what the future may develop. I am an expert in poultry farming or culture, and expect to make the apiary an adjunct to the business I am planning to begin *next* year—provided I learn enough about it this year. LONG ISLAND.

ANSWERS.—1. Any time now will do, as there will be early flowers for the bees to work on.

2. I should say Prof. Cook's book goes into practical details, but it's a good thing to have "line upon line," and you will like Root's "A B C of Bee-Culture," also Dadant's "Langstroth on the Honey-Bee."

3. Decidedly yes, and you'll have lots of fun at it.

4. If you don't want the bees to swarm you can get the start of them by dividing.

Transferring—Putting on Sections.

1. Last fall I bought at an auction several colonies of bees in frame hives, which, being hived without the use of foundation, the combs are built crosswise of the frames, making all fast together. The hives, I believe, are called the "Eclectic." The front and back are 3 inches thick, and fast to the bottom-board; both sides can be taken off, leaving two division-boards, one on each side of the frames. I wish to transfer into the light chaff hive. Can it be done? If so, how?

2. Two of the colonies I wish to transfer are weak. Can they be united at the same time they are transferred?

3. How soon can sections be put on after transferring? NEW YORK.

ANSWERS.—1. They can be transferred much as your text-book instructs to transfer from box-hives, but you may have the advantage in this case that possibly one or more of the frames can be first got out, and if no frame can be got out, then with a long-bladed knife you cut away all attachments from the walls of the hive, and then turning the hive upside down dump out the whole of its contents.

2. Yes, if you transfer at a time when honey is yielding there will be little trouble about uniting.

3. Put on sections when clover—if that's your first principal crop—has commenced to yield, or when you see the bees put bits of white wax along the top-bars and upper parts of the brood-combs.

Don't Ask for a Catalog.

Please send your catalog of sections and bee-supplies. BEE-KEEPER.

ANSWER.—Perhaps this doesn't fairly come under the head of "Questions and Answers," and yet as I get a communication like it quite often, it may save some stationery and postage for me to say here that I'm not in the supply business—have no catalog, no hives to sell, no bees, no honey, no nothing. I'm just an every-day bee-keeper that the editor has hired to stand up and have all sorts of questions fired at him, and then I guess at the answers. The only thing I ever have to sell is honey, and it isn't worth while to ask me about that, for it's generally sold in a lump before it comes off the hives. Ask me anything you like about bees or bee-keeping to be answered in this department, but don't ask me for catalog.

C. C. MILLER.

AMERICAN
OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Farmers and the Price of Honey.—In the Canadian Bee Journal Dr. Miller having referred to the opinion that farmers hurt the honey market by selling at a low price, C. H. Dibbern asks him if he ever knew "a farmer who didn't get all he could for his honey?" Dr. Miller disclaims paternity for the opinion which he calls a tradition, and says:

> "But as I understand the tradition, it doesn't matter a bawbee if it should be fully establisht that every farmer from Cain down, always got the last cent he could for his honey. The point is, that his honey isn't worth a price proper for a good article, but there is such a general feeling that honey is honey, that when a farmer sells a dirty mess at five cents, that does a great deal towards establishing five cents as a proper price for everything that comes under the name of honey. Now, mind you, I don't say that's true. I am only trying to instruct you in the tradition. I never had any practical experience in the matter."

Incidentally the Doctor takes occasion to ventilate his long-unmentioned theory—a theory too unpopular to be mentioned on his native soil—that the moral right that a bee-keeper has to a certain territory should be made legally secure.

◆

Eat More Honey.—Mr. F. H. Dow, of New York, has the following excellent recommendation of honey in the Orange Judd Farmer:

> "There is no more delicate or wholesome a sweet in existence than the nectar of flowers, so skillfully gathered and stored by the honey-bee. Its use ought to be more general. Indeed, honey should be used as common as butter. Children usually like honey, and they should be allowed to use it freely. It is healthful, and in all cases of colds, sore throat and the like it acts as a medicine. Whenever you purchase a cough medicine, honey is usually one of its principal ingredients. My two children have nearly always had all the honey they cared to use, and I am confident it has been beneficial to them. On our table we consume large quantities of honey, and I actually believe its free use is conducive to the family health."

It would be a good thing to get your local newspapers to publish such testimonials for the use of honey. Suppose you take the above paragraph, with a sample of your nicest honey, to your local editor, and see if he won't be glad to publish the one and eat the other. And he will likely say, also, that you have the best honey he ever tasted.

◆

The Bee Journal and Spelling Reform is toucht on by Mr. C. P. Dadant in his very sensible article on another page. One would conclude, from the way a few of our readers have written to us in opposition to the contemplated reform in spelling, that they were entirely ignorant of the fact that the English spelling of to-day is entirely different from what it was a century or so ago. Just look at the following—the way Shakespeare spelt in the 17th century:

> Sunne (sun), cuppe (cup), fysche (fish), musick (music), civill (civil), horrour (horror), duckcoy (decoy).

Say, don't some of the old-foges want to go back and learn how to spell? We should think they would, or else try to *help* continue this wise reform in our spelling. Many bee-keepers don't know it, but Dr. C. C. Miller—whom all know, as well as admire—is right with us in trying to have the American Bee Journal do what it can toward simplifying the spelling of English words.

Some people think that the whole thing is simply a *fad*, or the idea of a few crazy-headed, would-be reformers. For all such, as well as for some others, we are glad to reproduce here a portion of an editorial in a recent issue of the New York Voice, with this heading:

IS SIMPLER SPELLING A MERE FAD?

It is amusing always, but sometimes, we confess, a little provoking, to note the dense prejudice, and often downright ignorance, that are encountered by any attempt at the simpler spelling of English words. Is it nothing that men like Benjamin Franklin, Noah Webster, Noah Porter, for years president of Yale College, W. D. Whitney, the editor of the Century Dictionary, Dr. Murray, the editor of the great Oxford Dictionary, now in progress of publication, Prof. Max Muller, Prof. W. W. Skeat, the famous etymologist, Prof. Lounsbury, of Yale, and other leading English philologists of England and America, earnestly advocate this reform, and give very substantial reasons for their faith in it? Is it nothing that William T. Harris, the United States Commissioner of Education, declares that this reform, if carried out fully, would save two years in the school life of every child, telling us that he has demonstrated this by actual experiments; and that Dr. J. H. Gladstone, member of the school board of London, says?

> "The average English child spending eight years in school spends 2,320 school hours in spelling, reading, and dictation, and 720 hours of spelling lessons might be dispenst with if our spelling were simplified. The child-life of no other nation is so clouded with the misery of such absurb and antiquated spelling."

And that thereupon Max Muller pertinently asks?—

> "Is every English child, as compared with other children, to be mulcted in two or three years of his life to learn it?"

Is it nothing that so level-headed, big-brained a statesman as William E. Gladstone should say?—

> "I often think that if I were a foreigner, and had to set about learning English, I should go mad. I honestly can say I cannot conceive how it is that he learns to pronounce English, when I take into account the total absence of rule, method, and system, and all the auxiliiaries that people usually get when they have to acquire something difficult of attainment. There is much that may be done with advantage in the reform of spelling as to the English language."

Is it nothing that some of our leading merchants and manufacturers declare that a very serious drawback to the extension of trade into countries of other tongues is the grave and needless complexities of English spelling? Is it nothing that the great matter-of-fact and scholarly German government, by an imperial decree, has ordered the dropping of all silent letters in German words, and that these words be phonetically spelt—"Express every sound you hear in correct and distinct pronunciation;" and that the French Academy has taken steps for the reform of the spelling of many of the French words, and that Italy, "classic Italy," has made her language phonetic; and poor Spain, and nearly all other nations in Europe are moving in the same direction? Are the Anglo-Saxons alone to pay the penalty in orthography of being the great-grandchildren of blundering ancestors?

We might say that the publishers of the New York Voice—Messrs. Funk & Wagnalls Co.—are also the publishers of the great Standard Dictionary. They are the leaders in several reform movements, one of which is the spelling reform.

◆

The New Union still continues to grow. It is getting ready—preparing to fulfill its great mission of usefulness to the pursuit of bee-keeping. Of course not much has yet been done—it has had few opportunities, and less funds. Prof. Cook, in the April Pacific Bee Journal, has a few words on "The Unions," from which we quote the following:

> "The New Union promises to combat every evil of any magnitude that attempts the injury of bee-keepers. As yet it has only talkt. People seem doubtful if it will grapple with adulteration, etc., especially the wrongs that the Old Union resisted so effectually......Many hold aloof because of such doubt. I think we should all unite on one Union, and that the one that would fight every enemy to the knife."

Well, what have the General Manager and Board of Directors to say to Prof. Cook's strictures upon the United States Bee-Keepers' Union? They are the fighting part of the organization, and to them bee-keepers must look for the results.

Our own faith in the ultimate value of the work to be done by the New Union is as strong as ever. It needs only the funds, and the opportunities to use them. When the former are ample, the latter will no doubt be found in sufficient abundance.

Here is what a Kentucky bee-keeper has to say about joining the New Union:

GEORGE W. YORK & CO.—
Dear Sirs:—Enclosed find $1.00 for membership fee to the United States Bee-Keepers' Union. I want to put in my mite to help up that grand organization. It should have the hearty co-operation of every bee-keeper in the United States. Why can't we build one of the grandest associations in America? I believe we have the good-will of each other, and a reasonable amount of intelligence. We may be lacking some in financial resources, but it seems to me if all bee-keepers could realize the benefits of a strong and thorough organization, built on the broad platform of the United States Bee-Keepers' Union, they surely would be willing to contribute as much as $1.00 at least.
I hope the next meeting-place will be at Cincinnati.
W. S. FEEBACK.

THE WEEKLY BUDGET

MR. JOHN W. WILCOX, of Jo Daviess Co., Ill., writing us March 28, said:

"Bees have wintered well in this vicinity. I did not lose a colony."

MR ALEX. SCHROEDER, of Austria, writing us March 26, said:

"We had hardly any winter this year, but still the vegetation is very backward, and so are the bees."

MR. JACOB OSWALT, of Stark Co., Ohio, is writing a series of articles on his bee-keeping experience for the Alliance, Ohio, Review—a leading newspaper there. This is a good idea. No doubt every newspaper in the country would be glad to publish a few articles on bees and honey, if written by local bee-keepers. It is a good way to advertise the value of honey as a daily food. Try it.

MR. ARTHUR MILLER, of Windham Co., Vt., when sending the dollar to renew his subscription, added:

"I could not get along without the American Bee Journal."

Now, we were glad to have Mr. Miller say that, for we believe he means it. We also are often inclined to think that there are quite a number that feel the same way—we know there are many that *pay* the same way—*promptly*. But there are, oh, so very many that seem to *like* to get the Bee Journal right along, but who seem to *forget* that we need their subscription dollars in order that we may be able to continue to send the Bee Journal to them so regularly.

Suppose *all* our good people who are in arrears on their subscription just look up the matter *now*, and send in enough to pay to the end of 1898. If about two thousand should do that we'd say—well, we believe the "Mrs. Editor" could say it better then, for *we'd* be "too full for utterance"—full of joy and thankfulness. And we believe those same subscribers would be happier, too.

MR. J. H. MARTIN—the California "Rambler-ing" correspondent of Gleanings for years—seems to have been greatly affected by the pictures of Mr. Golden's section-cleaners—but more imprest, evidently, by the two-handed "cleaner," or operator, than by the machines themselves. Just see how hard he has been "struck:"

"Mr. Editor, I wish to enter a protest against the method Mr. Golden uses to illustrate his machine. I have tried to find the useful points in the machine, but never get further than the beautiful young lady in the foreground, who is looking right at a fellow. Take her away so I can study the machine. Stop my paper." [Didn't think of it before, but Golden must have had his eye on you. So you've been caught in the trap? Tired of making flap-jacks and keeping bachelor's hall, eh?—ED.]—Gleanings.

MR. W. F. MARKS, of Ontario Co., N. Y., recently visited The A. I. Root Co. Mr. Marks was instrumental in getting for his State the enactment of the law against spraying fruit-trees while in bloom. He has lately been working up the Apis dorsata business—trying to get the Government at Washington to send some one after the big bees of India. He thinks they would be quite an acquisition to this country. But some other very good bee-keepers don't agree with him on that point. We'd like to see that anti-adulteration law pass in Congress first, and thus protect the purity of the honey produced by the bees we already have before getting bigger bees here to gather more honey to compete with glucose and other adulterants.

MR. GEO. W. HUFSTEDLER, of Bee Co., Tex., writing us March 29, said:

"Our bees are gathering honey at a lively pace now, except a day now and then when we have a wind from the north. My advertisement in the Bee Journal brings me lots of business."

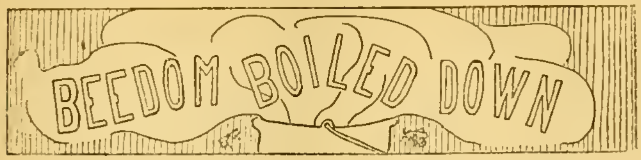
Mr. Hufstedler evidently knows how to get his share of business. Some others might do the same who are not now advertising in the Bee Journal. If you have queens or supplies to sell, the bee-paper is the place in which to let it be known. Our advertising columns are open to all honest dealers.

MR. W. L. COGGSHALL, of Tompkins Co., N. Y., called on us, with his young son, April 5, when on their way on business further west. Mr. C. has nearly 1,200 colonies of bees in 13 apiaries. His crop last year was about 50,000 pounds of extracted honey, and 4,000 in the comb. He and his brother "D. H." have been in the bee-business since 1862, so they have had a good opportunity to see how bee-keeping has grown in all these years. We take it that they have made some money in the business, tho doubtless less to-day than in their earlier years in honey-production.

MR. O. B. BARROWS, of Marshalltown, Iowa, died lately. We do not know the date or particulars of his death. He was once mayor of Marshalltown, and had been a regular reader of the Bee Journal for years.

MR. J. E. BUNKER, of Cook Co., Ill., wrote March 31, when paying his subscription:

"The American Bee Journal contains too many items of interest for one interested in that line to be without."



T Supers.—R. C. Aikin stands with Dr. Miller for T supers in preference to wide frames or section-holders. Doolittle thinks a properly made wide frame is better than either of the others.—Progressive Bee-Keeper.

* * *

Storing Honey in Cisterns.—Gleanings says R. Wilkin, of California, has his honey stored in a *fire-proof concrete* reservoir. He is holding his 14 tons of extracted for 5 cents, which he is likely to get if the crop is as poor as anticipated.

* * *

Nailed Sections, on account of their solidity, says Doolittle in Progressive Bee-Keeper, are so much better that he wouldn't take one-piece or dovetailed sections as a gift if he could buy material for nailed at three times the price of others.

* * *

Another Section-Cleaner.—J. A. Golden comes out in Gleanings with another section-cleaner—his third, is it?—this time the cleaner being a belt running almost horizontally over two wheels. He claims that the belt will jar a comb much less than a solid-surface disk or wheel.

* * *

Taking Bees Out Early.—J. B. Hall likes to get bees out of the cellar as early as March 1, so as to start early breeding. R. F. Holtermann has been putting them out earlier and earlier, and wants them out as soon as they can have a good, safe flight.—Canadian Bee Journal.

* * *

Enlarging vs. Contracting.—Hasty in Review refers to Doolittle's plan of starting in spring with 10 frames and then at the harvest taking out what the queen doesn't occupy, and says he works the other way. Starts with seven, then at harvest fills up the extra-prolific ones to 10 or more frames.

* * *

Big Average Per Colony.—Editor Leahy, in his explorations on Long Island, has discovered a bee-keeper, John Young, who year after year averages 100 pounds per colony from 100 colonies, which he sells at 20 cents, making his average yearly sales $2,000!—Progressive Bee-Keeper.

* * *

Bees on Farms.—The editor of the Busy Bee is pushing with both shoulders to have the time come he would like to see in this country, "when every farmer and fruit-grower will keep a few bees, and the value of the honey-bee to the orchardist, and of honey as a food product, will be generally recognized."

* * *

Light Sections Selling Best.—G. M. Doolittle says in Gleanings that last fall he assorted his sections as to weight, making certain cases of 20 sections each weigh 19, 20 and 21 pounds, respectively. The 20-pounders brought a cent a pound more than the 21's, and the 19's 2½ more than the 21's. Strong argument for light weight.

* * *

Floating Pollen.—Hasty takes Dr. Miller to task for admitting the possibility of pollen enough in honey to set the queen to laying. After a good deal of exploration in that direction himself, he says: "If he will take a microscope and examine different samples of honey until he has found even one grain of pollen, he will thenceforth discontinue that strain of speech."

* * *

Moving Bees in Summer.—E. Ruffy reports in Revue Internationale that he moved an apiary of 22 colonies a distance of ⅛ of a mile, in the evening, taking no special precaution, and there was no trouble. Again, early in September he moved 92 colonies 1/10 of a mile successfully, taking them early in the morning. But to be successful one must move the whole apiary.

* * *

Foul Brood.—F. A. Gemmill sounds a note of warning against putting too much trust in R. L. Taylor's statement, that it is unnecessary to first place the bees on starters for four days or so before allowing them to work out foundation in order to effect a permanent cure. He thinks Mr. Taylor's plan may have workt with him, but would not be wise in all cases and under all circumstances.

Robbing.—F. Chatelain says in L'Abeille that the worst kind of robbing is what is called quiet or slow robbing, in which the robbed colony submits without objecting, there being no fighting in the case, and the robbing going on through the entire season. His plan of curing is to shut up the robbed colony for a day or two, then on opening it stir it up by pounding with a stick so as to make it defend itself. It is to be hoped that such robbing is not very common. Of the ordinary cases of robbing he thinks by far the greatest cause is allowing a colony to become so short of stores that it starts to robbing in sheer desperation.

* * *

Bee-Space and Brace-Combs.—Dr. Miller says, in Gleanings, that with the ¼-inch space between top-bars he has more brace-combs than he likes, and wonders whether it would be any improvement to have more or less than ¼. The editor thinks it possible less might be better, and says that bees pass freely through ⅔ that space, altho they "scrooch" a little. He tried it by putting over top-bar cleats 2-12 thick, and placing glass over. The average bee, when walking full height, stands about 3/16-inch high.

* * *

Section-Holders vs. T Supers.—The editor of Gleanings and the "stray straw" man are at swords' points with regard to which is better, the latter asking for one case in which one who has tried both preferred the section-holder. Mr. Root and his lieutenants said there were *hundreds* of them, but they couldn't recall names, till I. S. Tilt came to the rescue and said he was the man. Now the editor calls for a show of hands from those who have tried the two arrangements, asking their exact preference.

* * *

Temperature of Cellars.—Chas. Dadant says when the temperature in a cellar surpasses 47°, the bees desiring to go out are in continual movement. They leave the hives in great numbers to lose themselves in following up the least ray of light that enters through some crack. Dr. C. C. Miller, while admitting that such experience may be correct, thinks it unnecessary. With pure air in the cellar, his bees remain tranquilly in the hives at 50°, altho not quite so quiet as at 45°.—Revue Internationale.

* * *

Moving Bees.—The Review says when a colony is to be shipt a long distance it's a good plan to set it on a new stand for a few hours before shipment, so that the old bees that do most of the worrying en route may be eliminated. The buyer might object to getting a less number of bees, but the colony on arrival will be worth more without the old bees. E. A. Wander told him bees could be moved a short distance without stopping the entrance. Just subdue with smoke, then put them on a wagon.

* * *

A Boston Yarn.—The Pacific Bee Journal copies it from Boston Transcript. At Yarmouthport they had to stop tearing down an old house because the bees had "made a hive" (doesn't say whether dovetailed) between the walls. "One whole side of the building is solidly packt with the honey, and it is expected that hundreds of pounds will be taken out." Say, Bennett, why didn't you agree to eat (you and Hasty) at seven sittings, all that "whole side of the building" will be likely to yield?

* * *

"Strained" Honey is generally spoken of as a somewhat unsavory mess, being mixt with pollen, brood and dead bees. Doolittle comes to its defence in American Bee-Keeper, and says when he was a boy strained honey at their house was all right, and a good deal better than *some* extracted honey, taken from the brood-nest, with disgusting-looking larvæ by the score, together with their food, floating on the surface.

* * *

Great Fall in Price of Sections.—When Doolittle commenced bee-keeping, sections cost $20 a thousand. He got machinery and made them to sell. Soon the price came down to $15, then $10, $8 and $6. At $6 he gave up making to sell, but made for his own use till $3.50 was reacht, when he concluded it was cheaper to buy. He says the sections at $20 didn't compare in any way with the $3 sections of to-day.

* * *

Why Swarms Go West.—Dr. Miller having replied he didn't know why so many swarms went west, Hasty makes the guess that the prevailing winds being from the west, a runaway swarm being in search of better supplies, goes west on account of the smell of abundance coming from that direction. That looks more like a reason than a guess, *if* the west is the chief direction of runaways.

Sweet ♦ Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)	.60	$1.00	$2.25	$4.00
Alsike Clover	.70	1.25	3.00	5.75
White Clover	.80	1.40	3.00	5.00
Alfalfa Clover	.60	1.00	2.25	4.00
Crimson Clover	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage. if wanted by freight.

Your orders are solicited.

GEORGE W. YORK & Co.
CHICAGO, ILL.

Southern Home of the Honey-Bee

Is now ready for your orders for QUEENS of either **3 or 5 Banded Italians and Steel Gray Carniolans.** More than 300 Tested Queens to begin with. Untested, either race, 75 cts. each; June and until October 50 cents each. Tested $1.00 each. Good Breeders, $2 each. Straight 5-Banded or "Faultless" Queens, $5.00 each. Satisfaction guaranteed.

GEO. W. HUFSTEDLER,
Successor to Hufstedler Bros.,
3Atf BEEVILLE, Bee Co., TEX.

Please mention Bee Journal when writing.

Muth's HONEY-EXTRACTOR Square Glass Jars.

Root's Goods at Root's Prices.

BEE-KEEPERS' SUPPLIES in general, etc etc, Send for our new catalog.
Practical Hints" will be mailed for 10c. in stamps. Apply to—

Chas. F. Muth & Son, Cincinnati, Ohio.

Please mention Bee Journal when writing.

OUR PRICES are worth looking at. We are making the new

Champion Chaff-Hive

with dovetailed body and supers, and a full line of other Supplies, and we are selling them CHEAP. A postal sent for a price-list may save you $$$$

R. H. SCHMIDT & CO.,
Box 187 SHEBOYGAN, WIS.

Please mention Bee Journal when writing.

☞ IF YOU WANT THE

—BEE-BOOK

That covers the whole Apicultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keeper's Guide.

Liberal Discounts to the Trade.

PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

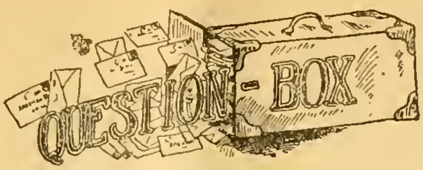
J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y.

Please mention Bee Journal when writing.

BEE-KEEPERS! Let me send you my 64-page Catalog for 1898

J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing



In the multitude of counsellors there is safety.—Prov. 11-14.

Experience in Retailing Honey.

Query 70.—1. Have you had any experience in retailing honey?

2. If so, will you name a few of what you consider the needful points in order to make it a success?—HONEY-MAN.

R. L. Taylor—1. No.

Eugene Secor—1. No.

Dr. C. C. Miller—I'm no good at it.

Jas. A. Stone—No; only a little at home.

C. H. Dibbern—1. Yes, decidedly. 2. Produce honey that everybody wants.

Prof. A. J. Cook—1 and 2. I have, and give results and suggestions in my "Bee-Keepers' Guide."

W. G. Larrabee—1. Yes. 2. Represent your honey just as it is, sell a good article, and ask the same price from every one.

E. France—1. Yes. 2. Get your crop in first-class marketable shape and neatness. Let it be known that you have such honey to sell.

G. M. Doolittle—1 and 2. Leave a free sample at each house. Then go around a few days later and you will make sales at nearly every place where you left a sample.

J. M. Hambaugh—1. Yes. 2. *a.* A good salesman. *b.* A pure and wholesome article. *c.* Packages of various sizes and attractive forms, both comb and extracted. *d.* Push the goods.

J. E. Pond—1. Not to any extent, as I have never produced honey to sell. 2. I could give my opinion, but with no experience in the matter such opinion would be simply a "Yankee guess."

Dr. J. P. H. Brown—1. Yes. 2. The nicest and neatest shape. Education of customers as to what is pure and clean honey. Talk *up* the wholesomeness of your honey, and talk *down* the adulterated commercial syrups.

A. F. Brown—1 and 2. Yes, extracted honey in glass jars and tumblers; only put it into jars and tumblers about as fast as needed. Use small, plain, neat labels. Don't be "stingy" with sampling to prospective customers—to every one.

Rev. M. Mahin—1. A little. 2. Have *good* honey put up in attractive packages. Give away small samples. I have retailed more at my house than anywhere else. When people find that I have a good article at a fair price they come for it.

Emerson T. Abbott—1. Yes. 2. A fine quality of honey and a good live salesman, who is thoroughly posted in the bee-buiness, are two things that are very essential. You cannot tell a man on paper how to sell goods. He must learn this by practical experience.

Mrs. L. Harrison—1. Yes. 2. Never consider an order too small to give it your attention. Show your goods, and

Two Special Offers.

As explained in former ads., publishers can afford to put forth extra efforts in securing *new* subscribers; as the majority remain, once they become subscribers to a *good* journal. It is from this point of view that I make the following offers:

Offer No. 1.

To any one not a subscriber to the Review who will send me $3 00, I will send the Review for 1898 and 1,000 strictly firstclass, snow-white one-piece Sections. After accepting this offer if any one wishes to buy more sections, I will furnish them at the following prices: 1,000, $2.75; 2,000 for $5.25; 3,000 for $7.50; 5,000 for $12 00. Sections will be shipt from any of the following points: Flint, Mich.; Chicago, Ill.; Medina, O.; Jamestown, N.Y.; Higginsville, Mo., or Omaha, Neb.

Offer No. 2.

To any one not a subscriber to the Review who will send me $1 50, I will send the Review one year and a fine, TESTED Italian Queen. Purchasers may have either the bright, golden strain, or the dark leather-colored reared from imported mothers. After accepting this offer, if any one wishes more queens, they will be furnisht at the following prices: Single queen, 90 cts.; 3 for $2.65; 6 for $5.00; 12 or more at 75c each. Orders will be filled in rotation, and safe arrival guaranteed.

Unless otherwise ordered subscriptions will begin with the January issue; and the December, 1897, number will also be sent, free.

If you are not acquainted with the Review, and wish to see it before subscribing, send 10 cents for three late but different issues, and the 10 cents may apply on any subscription sent in during 1898. W. Z. HUTCHINSON,
FLINT, MICH.

Please mention Bee Journal when writing.

TAKE THE BIG FOUR!

Prize-Winning Golden Italian Queens.
Best Seed Corn in Ohio.
Seed Potatoes at living prices.
Choice Plymouth Rock Eggs.

Catalogue Free.
J. F. MICHAEL, Greenville, Ohio.
11Dtf Please mention the Bee Journal.

BEES FOR SALE.

About 90 Colonies of Italians. Any one wanting to start an apiary cannot do better than to call on Dr E. Gallup, Santa Ana, Calif., and examine the Bees before purchasing elsewhere. Double sets of Combs in Langstroth-Simplicity Hives, and warranted a superior lot of Bees for business. Correspodence solicited. **Dr. E. GALLUP,**
SANTA ANA, Orange Co., CAL.

RUMELY ENGINES

EMBRACE A COMPLETE LINE OF

Traction, Portable, Semi-Portable, Simple and Compound Engines.

They are made to supply the greatest amount of power from the least amount of fuel with the least attention. Traction engines range from 8 to 20 h.p. and their leading features are

Large Traction Power, Fast Travel, Easy Steamers,

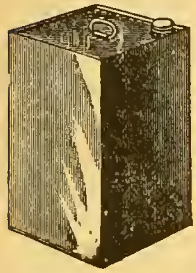
simplicity, great strength and durability.

Boilers are made of best steel boiler plate of 60,000 lbs. tensile strength. Fire box surrounded with water. Make also **Threshers, Horse Powers, and Saw Mills.** All are described more fully in our illustrated catalogue. Send for it—IT'S FREE.

M. RUMELY CO., LAPORTE, IND.

Please mention Bee Journal when writing.

Only 6 cts. per Pound in 4 Can Lots or Over.



Finest Alfalfa Honey!

IT SELLS ON TASTING.

The Honey that Suits All Who Buy It.

We can furnish **White Alfalfa** Extracted Honey, in 60-pound tin cans, on board cars in Chicago, at these prices: 1 can, in a case, 7 cents per pound; 2 cans in one case, 6½ cents; 4 cans (2 cases) or more, 6 cents. The Cash MUST accompany each order.

☞ A sample of the honey will be mailed to an intending purchaser, for 8 cents, to cover postage, packing, etc. We guarantee purity.

GEORGE W. YORK & CO., 118 Michigan Street, CHICAGO, ILL.

We want

EVERY BEE-KEEPER

......To have a copy of......

Our 1898 Catalog

☞ Send us your name and address and we will take pleasure in mailing you a copy

G. B. LEWIS CO., WATERTOWN, WIS.

Special Agent for the Southwest—

E. T. ABBOTT, St. Joseph, Mo.

Mr. Abbott sells our Hives and Sections at factory prices.

Direct-Draft Perfect
BINGHAM
BeeSmoker

Bingham & Hetherington Uncapping-Knife.

PRICES OF BINGHAM PERFECT

Bee-Smokers and Honey-Knives!

Smoke Engine (largest smoker made)	4-in. stove.	Doz. $13.00;	each, by mail, $1.50
Doctor	3½ in. stove.	Doz. 9.00;	" 1.10
Conqueror	3-in. stove.	Doz. 6.50;	" 1.00
Large	2½-in. stove.	Doz. 5.00;	" .90
Plain	2-in. stove.	Doz. 4.75;	" .70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz. 4.50;	" .60
Honey-Knife		Doz. 6.00;	" .80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.
January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

Mr. Bingham, Dear Sir:—Please send per mail a 4-inch Smoke Engine. I have one of your Smokers; it is too small in time of trouble.
February 21, 1898. A. F. SEWARD, Riverside, Calif.

9A9t T. F. BINGHAM, Farwell, Michigan.

Page & Lyon Mfg. Co. New London, ——Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

Please mention the American Bee Journal. 7Atf

shade prices to suit quality. Keep grocerymen continually supplied, and purchase your family supplies in exchange. Favor your customers in every reasonable way.

G. W. Demaree—1. I sell at retail at my apiary store-room. Being located near a little town my sales are fairly good. 2. Be honest, liberal, never misrepresent the quality of honey sold, and give good weight. When the people know you, according to their conclusion will be your success or your failure.

J. A. Green—1. Yes. 2. Intelligence, industry, knowledge of the salesman's art and human nature, courtesy, tact, and a thorough knowledge of honey, are the principal qualifications. There are many little "tricks of the trade" that are hard to explain, and impossible in the limited room of this department.

GENERAL ITEMS

A Discouraging Prospect.

I feel that I cannot get along without the Bee Journal, altho from every sign this will be one of the worst years California has experienced for a long time. We have had but very little rain thus far, and can hope for little from now on, so it looks as if disaster must result to the bee-industry here this year. ALBERT ROZELL.

Los Angeles Co., Calif., March.

A Farmer-Bee-Keeper's Report.

I am a farmer and bee-keeper. I commenced the spring of 1897 with 25 colonies. During the summer I increast to 40, by natural swarming, and in July I harvested 1,000 pounds of comb honey and 200 pounds of evaporated honey. I don't use a honey extractor. I separate the honey from uncapt and unfinisht sections by evaporation. I have my honey all sold at 12 and 15 cents per pound. I found a market for it in Alliance, Ohio.

I have my bees all in the Falcon chaff hive, with 10 frames. I use the Langstroth frame, and winter the bees on the summer stands. They are all in grand condition—no signs of dysentery. JACOB OSWALT.

Stark Co., Ohio, March 31.

Preventing Swarming—Best Hive.

To prevent swarming, pile on the supers, 5 or 6, before the bees begin to whiten the tops of the combs. If there is a good nectar flow, you will get lots of honey, tho but few or no swarms.

The best hive for central Illinois is the same square as a 10-frame Langstroth, but 12 inches deep. Put the frames crosswise, or short way of the hive. Telescope all caps over the hives. Use frames six inches deep for extracting, and tier up the same as for comb honey. Use brood-frames for sections, inset top and bottom the same depth as sections. Tier up by placing the new super under the old one.

A machine for pushing the full sections out of a wide frame is easily made, tho I have never seen them advertised for sale.

The spring is early. White clover is abundant, and will bloom in April this year. WM. CAMM.

Morgan Co., Ill., March 29.

Plain Section and Tin Separators.

I have been very much interested and amused at remarks made in the American Bee Journal on no-bee-entrance sections and cleated separators. About 14 years ago I saw the advantages of the plain section, so I made and used several wide

DR. PEIRO,

CENTRAL MUSIC HALL, CHICAGO,

Please mention Bee Journal when writing.

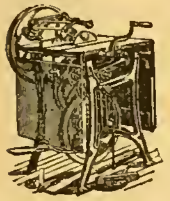
COMB FOUNDATION Wholesale and Retail.

Working Wax into Foundation for CASH **A Specialty.**

Hives, Sections, and a full line of Supplies. The **best** of everything. Write for Catalog, with prices, and samples of Foundation and Sections.

BEESWAX always wanted for cash or trade.

GUS DITTMER,
AUGUSTA, WIS.



ONE MAN WITH THE UNION COMBINATION SAW

Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing, Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery. Sold on Trial. Catalogue Free.

SENECA FALLS MFG. CO.,
46 Water St SENECA FALLS, N. Y.

Basswood Honey FOR SALE

We have a limited number of barrels of **very best Basswood** Extracted Honey, weighing NET about 280 lbs. which we are offering at 6 cents per lb. f. o. b. Chicago. Do you want a barrel or so of it? If so, address, with the cash,

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

READY TO MAIL

My 40-page Catalog of my Specialties, and **Root's Goods at their prices.** I carry a full line of BEE-KEEPERS' SUPPLIES, and can ship promptly. Catalog Free.

GEO. E. HILTON, Fremont, Mich.

FIRST PRIZE WINNERS

Our 1898 Mammoth Poultry Guide of 100 pages mailed FREE. Something entirely new, tells all about poultry, how to be a winner, how to MAKE BIG MONEY. Contains beautiful lithograph plate of fowls in their natural colors. Send 15 cts. for postage. **JOHN BAUSCHER, Jr.** Box 94 FREEPORT, ILL.

44A26t Please mention the Bee Journal.

QUEENS Untested, after April 1, $1; Tested $1.50; Select Tested, $2. Imported queens, direct from Italy, $5 each. The best of stock, either Golden or Leather Colored. Write for price-list. HUFFINE & DAVIS,
11A4t Ooltewah, Tenn.

Please mention Bee Journal when writing.

Catalog Free **A. I. Root & Co's Goods** for Missouri and other points, to be had at factory prices from **John Nebel & Son, High Hill, Missouri.** 9Atf

Please mention Bee Journal when writing.

Cash PAID FOR Beeswax

For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 26 cents per pound, CASH. No commission. Now if you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

GEO. W. YORK & CO.
118 Michigan st., CHICAGO, ILL.

frames and separators to accommodate the plain section, but finally discarded all in favor of the frame I am now using, the cleated separator being among those discarded.

My wide frame is made to accommodate four sections 4¼x4¼x1¾; the top and bottom bars made of pine strips 17¾ long by 1¾ wide by ¼ thick; the end pieces 4¼ long by 2 wide by ⅜ thick, with projection of ¼ inch on one side only. On the side opposite the projection is nailed a tin separator, 3½ inches wide, leaving a bee-entrance of ¼ inch at the top and bottom of the section, making an unobstructed passage from one end to the other of the case, and does away entirely with the necessity of sections with insets. It also enables the bees to build their combs flush with the front side of the sections, while at the side next to the separator there will be a bee-space, which is a great advantage in crating for market, and the bee-passageways in corners of sections are greatly diminisht. I have from 100 to 200 colonies run for comb honey exclusively, and have used nothing but this frame and section since 1885, and will continue to do so, as I am satisfied there is nothing better at present.

Walworth Co., Wis. F. W. TRAVIS.

Bees in Southwest Georgia.

The bee-industry is rather a new business in this section (southwest Georgia) as to Italian bees and movable-frame hives. I have persuaded some of our best farmers to try the new methods, and none regret it.

The gallberry honey exhibited at our Fair last fall was pronounced, by competent judges, "the best in the world."

Thomas Co., Ga. THOS. WIGHT.

Wintering Bees in a Cave.

I have had great success in wintering my bees in a cave well ventilated. One year ago I prepared the cave by packing in the bottom about one foot deep of fine flax straw to keep the moisture down and to absorb the moisture from the bees. I put 43 colonies into a cave 6x10 feet, and last spring I took them out all alive and in fine condition. Last fall I put in about the same number, and at this writing they are in fine condition. C. S. BURLEY.

Calhoun Co., Iowa, March 7.

Two Queens in a Hive, Etc.

I see so often that some one hints on the subject of two queens being in the same hive at one time, and it appears that it is doubted by many. Of course it is natural for only one queen to be in a hive, but I have seen two laying queens in one hive—a 10-frame hive. It was a hive that the colony had not yet completely filled the brood-chamber, and one day while looking through it I found a new queen, and on the next frame I found the old queen; both were laying, and so I took the old queen and introduced her to a colony of blacks, and all was well. I am satisfied that two queens are sometimes found in one hive, altho it is not natural to find it so.

I have been in the bee-business for 7 or 8 years, and have started several apiaries, one of which I am very proud of.

Bees did fairly well last season. I am with the Dadants on the hive question, as I have tried four different kinds.

P. W. STAHLMAN.

Columbiana Co., Ohio.

The Spelling Reform Endorst.

Bravo! Mr. Editor. I quite enjoyed the vigor with which you kickt back on the spelling question. A man who is able to keep right on when he knows he is *right*, altho not popular, has little need of outside support, and yet it may be a gratification to you to know that some of your readers—and I am fain to hope they are in the majority—appreciate your course in the matter of spelling.

I sometimes feel that I don't do as much as I ought for the reform, having been

$100

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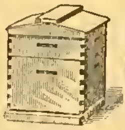

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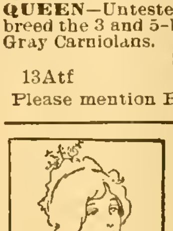

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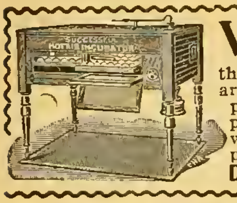

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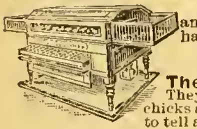

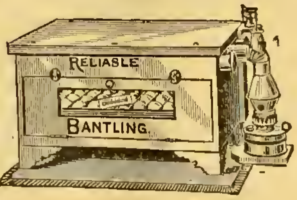

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☞ PROGRESSIVE BEE-KEEPER, 50c per year. "Amateur Bee-Keeper," 25c. Both for 65c., postpaid. Sample copy of the PROGRESSIVE free, and a beautiful Catalog for the asking.

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brought up to believe in its desirability from childhood, when I took my first lessons in a phonetic reader.

My father, in his younger days, was clerk—"assistant" he was termed at that time when he was the only one—to Isaac Pitman, who gave to the world the most popular system of shorthand, and spent much of his long and useful life in the endeavor to bring about a reform in the spelling of English. That Mr. Pitman was more successful than many in gaining some appreciation during his lifetime was shown by the fact that he was made *Sir Isaac.*

I have written phonography since my tenth year. (MRS.) A. L. AMOS.

Custer Co., Nebr.

◆

Bees in Good Condition.

My bees are in good condition. I have 30 colonies, and have not lost one in two years. D. E. LANE.

Washtenaw Co., Mich., March 11.

◆

Little Surplus Honey Produced.

Alfalfa is the principal honey source here, but owing to numerous hailstorms and water-spouts but very little surplus honey was produced in this vicinity during the season of 1897. I hope for better times this season, as the bees wintered well, and have been flying daily for about three weeks. Spring is about one month earlier than last year.

We have 50 colonies all active now, and wintered on the summer stands without loss. S. L. PAYNE.

Malheur Co., Oreg., March 10.

◆

All Wintered Well.

Last fall I put 34 colonies of bees into the cellar, all in good condition. March 15 being a fine day I set them out, and all came out in No. 1 condition. They have had several good flights, and all seem strong and ready for business. I intend to purchase 25 to 50 colonies this spring, unless my head trouble returns again. I have never fully recovered from it. Whenever I am out in cold winds my head troubles me. I wish the Bee Journal the greatest success.

J. W. VAN ALLEN.

Crawford Co., Wis., March 24.

◆

Bees in Texas.

Bees have been busy at work all during this month, and were doing well, but they are frozen in to-day.

I am glad that the American Bee Journal is taking the stand against fraud and adulteration. Give it to 'em! S. E. FRIEND.

Callahan Co., Tex., March 23.

◆

No Loss in Wintering.

Bees wintered well without any loss, and are in fine condition for spring work, with plenty of stores for quite a spring campaign. A. Y. BALDWIN.

DeKalb Co., March 26.

◆

All Wintered—The Outlook.

Our 162 colonies of bees wintered without the loss of a single colony—100 in the cellar and 62 packt in chaff out-of-doors.

White clover was badly injured last fall by the dry weather, but the snow and timely rains this spring have saved alive what was not killed out, and it is looking quite thrifty, so we are expecting some honey again this year, tho probably not so much as last year. MRS. L. C. AXTELL.

Warren Co., Ill., March 31.

◆

Bees Wintered All Right.

As a rule the bees in the greater part of this State have come through the winter in good condition. I have bees in four different places, and I have visited three of those places and found them all alive at each place. In all my bee-keeping experience this is only the second time that I have accomplisht so desirable a result. The other apiary being about 26 miles away, I have not yet gotten around to it. I find that many of our bee-keepers smother their bees, year after year, but owing to the weather this winter being a steady dry cold most of the time, the bees were kept more dry, and thus they came through all right, which is what they never do if it is damp and they sweat badly. E. S. LOVESY.

Salt Lake Co., Utah, March 19.

Mild Winter—Crop Reports.

Winter has past, and glad sunshine now welcomes our busy bees. Mine have wintered successfully on the summer stands, without any protection at all. This has been the mildest winter we have had for years. I look for a good honey-yield this season. Basswood failed last year, and so it will be very apt to come in again this year. White clover I think is all right.

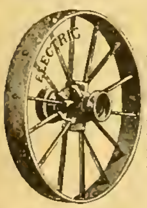
By all means do not stop publishing "honey crop prospects," for they are very interesting reading. Success to the "old reliable" American Bee Journal.

Cooper Co., Mo. F. N. BLANK.

Wintered Nicely.

I started in last spring with 14 colonies, increast to 32, and got 1,000 pounds of comb honey in one-pound sections, which I sold at 18 and 20 cents per pound. My bees have wintered nicely without any loss so far. They have been gathering pollen for the last 10 days. At present everything indicates a good bee-year. The American Bee Journal has been a great help to me during the last year. HIRAM MESSER.

Greene Co., Pa., March 14.



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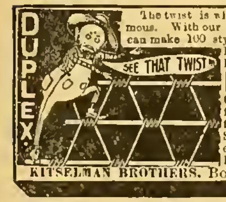

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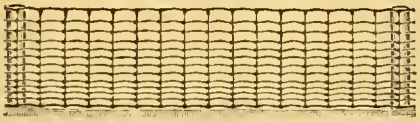

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Convention Notices.

Connecticut.—The seventh annual meeting of the Connecticut Bee-Keepers' Association will be held at the Capitol, at Hartford, Wednesday, May 4, 1898—10:30 a m. Every bee-keeper in the State should take an active interest in this meeting. All are cordially invited. MRS. W. E. RILEY, Sec.,
Waterbury, Conn.

Illinois—The spring meeting of the Northern Illinois Bee-Keepers' Association will be held at the residence of Alexander Peterson, 5 miles northwest of Rockford, Tuesday, May 17, 1898. All are cordially invited.
B. KENNEDY, Sec., New Milford, Ill.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Mar. 23.—Very little demand for honey in the comb, the season being about over for its sale in any quantity beyond a case or so at a time, many retailers refusing to carry it in stock owing to sales being infrequent. Prices askt are 10c for best grade of white, 8@9c for No. 1 or fair grade of white; ambers, 7@8c; dark, same. Extracted, 5@6c white; amber, 4@5c; and 4c for dark and buckwheat. Beeswax, 27c.
R. A. BURNETT & CO.

Detroit, March 22.—Fancy white is lower and now quoted at 11c. No. 1, 9@10c; fancy dark, 7@8c; No. 1 dark, 6@7c. Extracted, white, 5@6c; dark, 4@5c. Beeswax in good demand at 26@27c.

There is considerable dark and undesirable honey on commission now, and some of it will be carried over to another season.
M. H. HUNT.

Kansas City, April 9.—Fancy white, 1-lbs., 9@10c; No. 1, white, 9c; amber, 8c. Extracted, white, 5@5½c; amber, 4½@5c; dark, 4c. Beeswax, 20@22c.

Demand for both comb and extracted honey is fair. C. C. CLEMONS & CO.

Minneapolis. Mar 18.—Honey much more encouraging. Fancy white clover comb is selling here now at 10½@11½c. Not advisable to ship darker than amber. Extracted fancy white clover, 5½@6c; amber, 5c; dark, 4@4½c.

Outlook for honey much more encouraging.
S. H. HALL & CO.

Cincinnati, Mar. 21.—Demand fair for extracted, with insufficient supplies. Prices range from 4@6c. according to quality. Demand for comb is slow at 10@13c for best white. Beeswax in good demand at 20@25c for good to choice yellow.
CHAS. F. MUTH & SON.

Indianapolis, March 24.—Fancy white. 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white. 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand. WALTER S. POUDER.

San Francisco, Mar. 16.—White comb. 8@9½c; amber 5@6c; extracted, white, 4¼@5c; light amber, 4¾@4½c. Beeswax, 24@27c

The firm tone last noted as prevailing in the market for extracted honey continues to be experienced, with light stocks of all grades. The same condition is reported as existing in the East and in Europe. Comb honey is still in more than ample supply for current requirements, having to depend wholly on local customs.

Milwaukee, March 8. — Fancy, 11 to 12c.; A No 1, 10 to 11c.; No 1, 10 to 10½c.; No. 2, 9 to 10c.; amber and dark, 7 to 8c. Extracted, in barrels, kegs and cans, white, 5 to 6c.; dark, 4½ to 5c. Beeswax, 25 to 27c.

We are able to report an improved demand for fancy honey during the past few days, while the medium grades have also sold better, yet the surest sale is on the BEST. The supply continues equal to the demand, but the fancy grades are not in as good supply as the low and medium, which goes to prove that the fancy sells best—and the values better
A. V. BISHOP & CO.

Buffalo, March 11. — There is a good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

New York, Feb. 9. — There has been a fair demand for comb honey of late, and we are gradually reducing our stock. Fancy white is scarce and finding ready sale at 10 to 11c ; off grades white and amber, 8 to 9c.; mixt and buckwheat, 6c. Extracted is in fair demand—California white, 5½c ; light amber, 5c.; white clover and basswood, 4¾ to 5c.; buckwheat. 4c.; Southern, 50c. a gallon. Beeswax is steady at 26 to 27c.

Cleveland, Feb. 22. — Fancy white, 12 to 13c.; No. 1, 11 to 12c.; No. 1 amber, 9 to 10c. Extracted, white, 6 to 6½c.; amber, 4 to 5c. Beeswax, 22 to 25c.
A. B. WILLIAMS & CO.

St. Louis, Feb. 9.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.
WESTCOTT COM. CO.

A Book Recommended by Dr. Gallup.

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In Health and Disease.

By W. E Forest, M. D., 12th Edition, Revised, Illustrated, and Enlarged. This is the greatest and best work ever publisht as a HOME PHYSICIAN, and as

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is illustrated with a number of Anatomical plates from the best English work on Anatomy publisht, and others made expressly for this work; contains 300 pages, printed on fine calendered paper, and although the price of the first edition (much smaller in size and without illustrations) was $2.50, we sell this at $1.00, postpaid.

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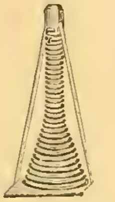
For sending us two new subscribers to the Bee Journal for one year, we will mail you the book free as a premium, or we will mail it for sending your own advance renewal and one new yearly subscriber. This is a wonderful premium offer. Address all orders to—

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

Queen-Clipping Device Free



The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 30 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

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It is the kind that does not sag.
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If you once try it you will have no other. Samples furnisht **FREE.** Large illustrated Catalog of all kinds of

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NEW YORK, is the city,
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Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**
Cash for Beeswax. BELL BRANCH, MICH.

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I ARISE

TO SAY to the readers of the BEE JOURNAL that **DOOLITTLE** has concluded to sell —BEES and QUEENS— in their season, during 1898, at the following prices:

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38th Year. CHICAGO, ILL., APRIL 21, 1898. No. 16.

CONTRIBUTED ARTICLES

SWEET CLOVER.

A Symposium On Its Value as a Forage Plant.

Some time ago we called for testimony from those who had experience with sweet clover as a food for stock, that having been called in question. We have received several responses to that request, and herewith give some of them, following them with some extracts from other sources :

A Luxurious Growth of Sweet Clover in Genesee County, Michigan.—From Bee-Keepers' Review.

SWEET CLOVER—AN EARLY FORAGE-PLANT.

I have read Prof. A. J. Cook's article on sweet clover, publisht on page 97. I do not wish to enter into a controversy in regard to the use of melilotus as a forage-plant—whether it is wise to try to use it for such purpose in all parts of our country can only be settled by fair trial. Sweet clover is not indigenous to our country, but both species have been brought from the Eastern World. These grasses were first placed by early botanists with the true clovers—red and the white. The Greeks establisht the genus "trifolium," or the three-leaved plant, under the name "triphullon;" but later, when the Latin language was written, it was called "trifolium." Subsequently the two sweet clovers were separated from the clovers and formed the genus melilotus. The Latin word "melilotus" was formed of the prefix *meli*, *honey*, and *lotus*, some leguminous plant.—Prof. Asa Gray.

One of the explanations of the use of lotos in the Latin is, a plant serving for fodder, *melilot* (Trifolium officinalis). This settles that the yellow sweet clover was early used for forage. As Prof. Cook suggests, it is probably an annual. But if it furnishes a good flow of nectar it may be used to advantage; for the white is known to be a biennial, taking the second year to flower, and after it matures its seed the entire plant dies. To have sweet clover for the bees the next season we have only to sow the seed of the yellow in the fall that the white dies, or early the next spring, and if it is an annual it will flower early in June here in Chicago; a full month before the white comes into bloom. Or bee-men may have a bloom of the white sweet clover every year by sowing its seed every year, and not without. D. S. HEFFRON, M. A.

Cook Co., Ill.

COWS EAT SWEET CLOVER IN FRANKLIN CO., MO.

It is strange indeed to see how widely men's experiences differ in the same pursuit, with the same thing. Some say that their stock can be educated to eat sweet clover. Mr. Lighton, on page 72 declares emphatically, "But I do know they simply will not eat sweet clover in any form."

Prof. Cook, a bright light who has dispelled the gloom from the field of bee-culture to a great measure, and has illuminated the way, also speaks depreciatively of sweet clover as a forage plant. I have 55 colonies of bees, and have had sweet clover growing on my farm for four years. My experience is that my stock, especially cows, eat it in any form—green or dry. I was somewhat surprised a few weeks after turning a fine Durham milk cow into a pasture where I had grown sweet clover, to find she had eaten the dry stems down to six inches of the ground. She did this in January, when the straw or stems were perfectly dry and apparently void of nutrition.

In making the above statement I don't want it inferred that I am casting any reflections on the statement of Mr. Lighton. I believe he has spoken truly his experience, but altogether the adverse to what I have experienced here in Missouri. A. B. BATES.

Franklin Co., Mo., Feb. 7.

STOCK WILL NOT EAT SWEET CLOVER IN SALT LAKE CO., UTAH

There seems to be considerable discussion pro and con in regard to the merits of sweet clover as a fodder and honey-plant. Under favorable conditions it is an excellent honey-producer, but as a fodder-plant, if it has any advocates in Utah, I do not know it. In June, when it is young and tender, when one would think stock would relish it, they won't touch it as long as they can get other feed. I have fed it with lucern and other clovers and grasses, and they invariably pick out and eat the other feed. If we do not give them other feed they will pick off a few tender buds and leaves, but under no condition except sheer starvation will they eat the stems. But in August and September, where the stock is allowed to roam among it at will, they appear to eat considerable of it; but some people tell us that even then it is because they have nothing better.

Be that as it may, we find that it causes a profusion of bloom and honey, small shoots not over six inches high being covered with blossoms, and under favorable conditions the bees work on it till frost. But in Utah, to try to make a fodder plant of sweet clover, it would not be worth the cutting and hauling.

Of course, Utah has her lucern or alfalfa, which, we think, is the best fodder and honey plant on earth. I have known nine tons to be cut from one acre in one season, and nearly all living animals will eat it—even pigs and chickens will thrive on it if fed green; and under favorable conditions we think it is one of the finest honey-plants grown. But, like sweet clover and other honey-plants, it is not much good as a honey-plant in a rainy, wet climate. Sometimes we have an abundance of honey from sweet clover, lucern, and Rocky Mountain honey-plant; at other times little or none. It is not because there is no nectar in the blossoms—it is because the rain washes it out. E. S. LOVESY.

Salt Lake Co., Utah.

STOCK EAT SWEET CLOVER IN WELD CO., COLO.

They are all having a drive at the sweet clover question, and yet I think they have not got the right end of some of the points. As to the question whether stock will eat it and thrive on it, I have seen enough to know that both horses and cattle do, and do it readily. It is simply one of those things that they not like when first tasted, but of which they grow fond with use.

In South Africa, when they wish to fatten a steer, I have heard they feed on sweet potatoes, and nothing else, and the beast won't start on them for about two days, and after having them for a time will eat them by preference over anything else.

Right across the road from me there is a large field, part hay land, part rough, with cottonwood and willows; in this there is a quantity of sweet clover. I saw 70 head of cows, young steers and calves turned in there after the cleaner parts were cut last fall, when there was plenty of uncut hay and after grass, and saw the whole bunch eat the sweet clover chiefly and voluntarily the moment they were put in. Some were half Texans from the southern part of Colorado or New Mexico, some were natives.

The seedling sweet clover is very small in the early season, but grows quite heavy in the autumn, but does not flower, and stays soft, and gave in this case great pasture, and the stock flourisht. I think it would make a fair crop of hay cut late in the fall, and the next season it would certainly cut an early crop of hay, and flower well afterwards for the bees, and if the land was then cultivated it would be got rid of pretty effectually. WALTER A. VARIAN.

Weld Co., Colo.

STOCK EAT SWEET CLOVER IN CUMING CO., NEBR.

For the benefit of the American Bee Journal readers I will give my experience in regard to stock eating sweet clover. I have on my 160-acre farm about an acre of sandy land where I never succeeded in getting a satisfactory crop. So about six years ago I concluded I would have a crop of sweet clover there, but my experience told me that it would be a very difficult matter to get a catch by sowing the seed there, but I had a small patch, probably two or three rods, which stood very thick with one-year-old plants five or six inches high in the first part of May. A part of these—probably about 200 plants in all—were dug up and transplanted on that sandhill. They stood quite far apart, but they grew and bloomed that same year. In the fall, when the seeds were ripe, I scattered them all over the ground. The succeeding summer that hill presented a beautiful green spot; the clover grew over a foot high, but did not bloom until the year after, about the first of July. It bloomed the whole summer, and to my surprise the bees workt on it for two weeks after we had the first frost.

As I wanted a new pasture, ten acres adjoining this hill was sown to timothy, orchard grass, and blue grass. The sweet clover patch being almost in the center was fenced in with the rest. I really did not think at the time that my cows would eat the clover—it tasted very bitter. The cows were not put in the pasture until May of last year. The tame grass was then six to eight inches high, but it did not take long before they had found my sweet clover, and they kept it eaten down so low the whole season that only a spray of flowers here and there could be seen. The pasture was not overstockt, as six head of cattle was all that had access to the 10-acre lot.

I now concluded to sow more sweet clover, so 200 pounds was ordered, and 150 pounds was sown last October on 10 acres of wheat-stubble, and nothing more done to it. The balance of 50 pounds will be sown on the same 10 acres the coming fall. This is necessary in order to make it bloom every year.

You will get a catch of sweet clover best on very poor, solid ground, but it will grow equally well or better on good ground, providing that the weeds are cut often the first year. If left to grow they will kill the sweet clover. As it starts very slow, it is necessary to sow in the fall so the seeds can be softened during the winter and start to grow early in the spring. A zero spell will not kill the plants just coming out of the ground, if the ground is covered with stubble or other rubbish and dead weeds. Should the ground be clear or loose, the young plants will heave out and die.

Sweet clover transplants very well, and I have gotten such a high opinion of its merits, that if there was no other way of getting a few acres of it started, I would transplant one-year-old plants about 10 feet apart each way, which would only take a little over 400 plants to the acre. The year after I would plant 400 more between the others, and keep clean around each plant two or three months after they were planted. That would give them a sure start, and a growth of clover that would surprise all beholders.

If any one doubts that stock will eat sweet clover in preference to the best tame grass, he may call at my place in May or June, or any time while it is green, and I will convince him to his entire satisfaction that at least my stock is very fond of it. J. F. ROSENFIELD.

Cuming Co., Nebr.

IS SWEET CLOVER A NOXIOUS WEED?

This question has been up quite often the past few years and is pretty well settled by this utterance of the Ohio Experiment Station, recently issued in a newspaper bulletin:

HOW SHALL WE RANK SWEET CLOVER?

Many portions of Ohio have the roadsides and other sodden or "out of tilth" lands occupied by the white sweet clover plant (*Melilotus alba, L.*). Since it has been regarded as a noxious weed the former Ohio Statute placed it in the same list of proscribed plants with Canada thistle, common thistle, oxeye-daisy, wild parsnip, wild carrot, teasel, burdock, and cockle-burs.

Under the operation of this statute, private lands might be entered upon to destroy the melilotus growing for any purpose as for bee-pastures. The destruction of bee-pastures in this manner actually occurred near Delaware.

Rightly, then, it may be askt, "How shall we rank sweet clover?" To answer this we must consider where sweet clover grows, and what is its character. Sweet clover grows spontaneously along trampt roadsides, even to the wheel-ruts in abandoned roadways, and in trampt or sodden land anywhere. When found in meadow lands it appears not to occur except when the ground has been trampt by stock when wet. It grows by preference in old brick-yards. It may be grown in fields by proper tillage.

The character of sweet clover may now be determined. Viewing it in no other light we thus see that sweet clover grows luxuriantly in places where few or no other plants flourish. But it belongs to the great class of leguminous plants which are capable, by the aid of other organisms, of fixing atmospheric nitrogen, and storing it in the plant-tissues. It belongs with the clovers, and it may thus be used to improve the land upon which it grows, and this appears to be its mission. It occupies lands that have become unfitted for good growth of other forage-plants. Its rank, then, *is as a useful plant*, capable of increasing fertility of land.

How shall sweet clover be treated?

The character determined, the treatment to be accorded this clover plant is really settled. *The plant is the farmer's friend, to be utilized and not to be outlawed.* The plant grows and spreads rapidly. So do red clover, white clover, timothy, blue-grass, and other forage plants; but sweet clover grows where they do not; it indicates lack of condition for the others. Viewed in this way it is to be treated as preparing unfitted lands for other crops.

It may be mown a short time before coming into bloom, *and cured for hay. Stock will thrive upon it* if confined to it until accustomed to it. The roadsides, if taken when free from dust, may be made almost as profitable as any other area in clover by cutting the sweet clover and curing for hay. If this is regularly attended to while stock is kept from other lands that it invades, sweet clover will be found doing always the good work for which it is adapted.

The italics in the above are ours. We wish that every one who has been against sweet clover could read that strong defense of it.

A MISSISSIPPIAN'S ESTIMATE OF SWEET CLOVER.

The following paragraphs appeared in the Agricultural Epitomist of last January:

At the North, *Melilotus alba* is considered a weed and a pest—not lookt upon with any degree of favor except as a valuable plant for bee-pasture. In the South, it is one of the most valuable fertilizing and hay plants we have; also highly appreciated for its early spring and late fall pasturage. Stock are not fond of the plant at first, but soon acquire a taste for it. For dairy cows the hay is specially valuable, very largely increasing the flow of milk and the yield of butter, improving the quality of both, in fact. None of the clovers are superior to it as a fertilizer. It grows satisfactorily only on land well supplied with lime. It is distinctively a lime plant, and if there is but a very small percent of lime in the soil it will not thrive well, and we advise against sowing on such lands. On our lime prairie soils of East Mississippi and Central Alabama this plant is largely grown. It thrives admirably with Johnson grass—in fact, the two supplement each other nicely. The strong, deep-penetrating roots of the melilotus loosen up the hard subsoil, and enable the Johnson grass to grow off to better advantage.

It matters not how severe the drouth or excessive the rainfall, melilotus is a certain crop—a sure crop, independent of any variation of the seasons—a plant that can be depended on.

As a fertilizing crop it cannot be excelled, if equaled, by any of the leguminous soil-recuperating plants. On soils where the highest limit of corn production did not exceed eight bushels per acre, a few years of melilotus-growing on the land so enricht the soil that 30 bushels of corn per acre was easily raised.

Melilotus is a biennial, and reseeds itself every two years. It stands cold as well as alfalfa and red clover.

We have no seed for sale. We have no personal motive in speaking so highly of the merits of this plant. Recognizing these merits that characterize this plant, having personally witnest the practical values of the plant on our own farm as a fertilizer, hay, and pasture plant, we feel in a humor to do it justice by giving greater publicity to its virtues.

Is it not strange that a plant that has proven itself so meritorious at the South, and growing steadily and continuously in favor here, has no friends in the North to sing its praises or accord it any worth whatever, save the apiarist—the owner and lover of the honey-bee?

Oktibbeha Co., Miss. EDWIN MONTGOMERY.

After copying Mr. Montgomery's high testimonial to the value of sweet clover, Mr. A. I. Root has this to say in regard to it in Gleanings:

Please notice the writer is not a bee-keeper, does not sell seed, and has no interest in any shape in the matter. I would call special attention to what he says about its value in the South, and I want to add that we very much doubt whether there is a place in the North where cows cannot be taught to eat sweet clover when it is pastured or cut at the right stage of growth. I am sure there is not a locality anywhere where it will not prove to be one of the best plants known to enrich impoverisht soil by plowing it under. Our experiment stations are pronounced in its favor wherever a test has been made. Since the matter has been suggested in regard to *lime* for its growth, I am inclined to think our friend is right about it. This thing, at least, is true: It will grow on ground so poor that no other plant can be made to make a stand. In fact, it grows with rank luxuriance on soil thrown out from deep railroad cuts; and such land can be made productive by plowing under a heavy growth of sweet clover, without adding anything else; and, astonishing as it may seem, where the ground is rich, and will grow all sorts of weeds, we oftentimes fail to get a good stand of sweet clover. A. I. ROOT.

In the April Bee-Keepers' Review appear several articles on sweet clover, and also the beautiful illustration which Editor Hutchinson has very kindly loaned for our use on the first page this week. From the articles in the Review, we copy the following, as it all comes in so nicely with the rest of our symposium on sweet clover:

HOW TO GROW SWEET CLOVER.

In my opinion sweet clover can be made to grow upon any soil by a proper supply of lime applied thereto, artificially. My plan would be to plant the sweet clover in hills, or drills, the same as corn, and then use a cup full, a pint, or possibly a quart of fresh slackt lime to each hill. I would use a hoe to make a depression to receive the seed, then cover with lime, and finish with soil. The seed will come up if covered two inches deep, more or less. No one need be afraid to use even a quart of slackt lime, if thought best, to each hill, for it is my belief that the sweet clover plant will grow and thrive in *lime alone*, and without a particle of soil! My experience along that line seems to corroborate that statement. Three to five seeds to each hill will be ample, for if but one of them germinates, the plant will make a stool large enough to shade the entire plat of ground; even if not closer than three feet apart each way. M. M. BALDRIDGE.

Kane Co., Ill.

SWEET CLOVER MAKES GOOD PASTURE—EASILY ERADICATED.

I have sowed sweet clover upon pastures and waste-places for the last six years, and can say that it has filled the bill for stock; especially in dry seasons when other clovers and grasses are literally dried up. It is a mistake to say that stock will not eat it; as, after tasting it a few times, they give it a preference. Last summer I saw a pasture of 17 acres in which sweet clover was eaten down close to the ground, while Alsike, timothy, and white clover went to seed in the same lot. Just over the fence, in another lot, the sweet clover grew seven feet high, and so thick that one could scarcely pass through it.

It is called a weed by some, but this is not the case. Of course, if sown upon waste lands, such as swamps, open woodlands, clearings, etc., it will take the place of thistles and ragweed, and hold its own, but, as it dies root and branch the second year, there is no trouble getting rid of it. Not only

this, but it leaves the ground full of richness that it has brought up from the lower depths. A. A. ALVERSON.
Ottawa Co., Mich.

SOWING SWEET CLOVER—COWS EAT IT.

I have had six years' experience with sweet clover, and find that it will flourish in any place where Alsike or white clover will thrive; but it will not grow on "blow-sand."

I begin sowing it in the fall at the time that the seed is ripe, and continue until corn-planting time; sowing on the high land first and finishing up on low swamp-land. I sow it in waste-places, old slashings and pasture lots. In the fall of 1894 I seeded down 10 acres of land that had just been cleared and burned over. I sowed timothy, Alsike, and sweet clover, and went over it lightly with a drag. The following year I turned in seven cows. They did not touch the sweet clover until it was about two feet high, picking out the other grass that grew among it, then, as the hot, dry weather came on, they took to the sweet clover and ate it to the ground, allowing the other grass to grow up and blossom. The cows remained in good health, and gave good messes of rich milk.
Ottawa Co., Mich. DAVID BERTSCH.

Well, what more need be said in defense of sweet clover? It seems to us about all that is needed is for farmers to get better acquainted with the various values of sweet clover, and then take full advantage of all that the plant has to recommend itself.

⁂

Against the Plain Section and Fence.

BY J. S. SCOTT.

I am a subscriber to the American Bee Journal, and my old partner takes Gleanings. I have read with interest all that has been said about the old no-bee-way section and (misnamed) fence separator. I have been anxiously waiting for something in reference to them from some large honey-producer, such as Capt. Hetherington, C. Davenport, and others.

We were persuaded a few years ago, by the "Sage of Medina," and the "Medicine Man of the Marengoes," that in the 1⅞ two-bee-way section and tin separator we had reacht the acme of our pursuit, and advised to fall in line, which we did, and their praise has ever since been on our lips. But, behold! we are now advised to stop and turn back to the old no-bee-way section. This we could do were it not the demolishing effect on our bank account, for I feel that we could place before our customers just as nice a section of honey as we do now, but no nicer. It would cost—three of us who work together—at least $700 to make the change, and at the present price of honey we cannot afford to do so.

I believe each individual speaks from his own personal standpoint, and I would like to ask the "Sage of Medina" who is to be benefited by the change. Certainly not the honey-producer, nor yet the consumer, for we now place before our customers a most attractive section of honey, fit for the lips of Jupiter.

I read Gleanings from Genesis to Revelation, and see the change strongly advocated, more so than elsewhere. They quote Aspinwall, in Review, as saying that the cost in shipping-cases and sections alone will be 51 per cent less. It is impossible for me to see how any one can believe this. Do the Roots ask less for the no-bee-way section than for the other? Will a shipping-case cost less with veneering between every two rows of sections together with follower and wedge? I think not. To say nothing of the difference in handling the sections by inexperienced clerks. I am slow to impugn the motive of any one, but I do not think we will be compelled to use a search-light to find the only persons who would be benefited by this change. I also believe that to agitate any change so costly is bad policy, unless it is plainly shown to be a benefit to the producer and consumer. I acknowledge that I can see neither in this.

I could say much more on this subject, but I do not wish to encroach more on your time. Utah Co., Utah.

[We would suggest that Mr. Scott try a few of the new things this year, and then if he likes them, and feels there is enough in the change to pay him and his two friends for making it, they can go ahead and spend that $700. Otherwise, they'd better hang on to their bank account.

Be slow to make changes, until you have proven that the new in your hands is superior to the old.—EDITOR.]

COMB FOUNDATION.

How Much to Use in Sections, How to Cut and How to Fasten It.

BY G. M. DOOLITTLE.

I am requested to tell the readers of the American Bee Journal how much foundation I would use in the sections, how I cut the same (without having it stick to the knife, or breaking it), and how I fasten it in the sections.

The amount to use in each section is governed somewhat by the state of the "pocket-book," and whether you are going to hive your increase on full sheets of foundation, or only on starters in the frames. If you must rob your family of necessaries or comforts that you may buy foundation, then I should use only a triangular piece in each section, each of the three sides being 1½ inches long; or if I were to fill the brood-frames full of foundation for the swarm, then I should use starters in each section as above.

But if I had sufficient money so I could procure the necessary foundation, without a sacrifice to me and mine, then I should fill each section with *extra-thin* foundation to within ½ inch of the bottom, and within ⅛ of the sides of the section. This is what is called "filling the sections with foundation." And I should thus fill them if I allowed the swarms issuing from the apiary to build their own comb, which thing very many of our best apiarists consider just the thing to do. Any prime swarm has wax-secretion well under way when they leave the parent hive, it often being seen standing out in little white flakes from the wax-pockets, and if we furnish no place in which these new colonies can build comb, all of this secretion of wax is wasted (or often worse than wasted) by the bees using it in thickening the bases of the cells in the sections, this causing the consumers of our honey to growl about the "fish-bone" in the center of the honey. For this reason many of us think it best to let the bees use this wax in building brood-combs so as to allow no waste, and also because any section which is filled with foundation presents a much nicer appearance after being finisht, as a rule, than does the one wherein the comb is nearly or wholly built by the bees. And all know that it is the *nice appearance* of comb honey which causes it to sell at fancy prices. When the bees will no longer build worker-comb below—as many new colonies will not—after being hived two or more weeks, then it is profitable to fill out the rest of the brood-chamber with frames filled with comb or comb foundation.

CUTTING FOUNDATION FOR SECTIONS.

The cutting of foundation was something which used to bother me as much as any one thing I did about the bee-business; after finding out how to do it, it seems very simple. The first requisite is a piece of ⅞ lumber a little longer than any foundation which you will ever be likely to have, and as wide as two widths of the foundation, when two sheets are laid on it side by side. A 1¼-inch nail should be driven near each end down through this board into the bench or table, or whatever you use it on, so as to hold it in place, and still allow of its easy removal when not in use. Next get out two strips from the ⅞ lumber, two inches wide, and as long as the foundation-board which you have tackt to the table. Stand these by the side of the table or foundation-board, so they will nearly touch each edge of it; when you are to nail to the top of these strips a board from ¼-inch stuff, which is wide enough so as to come out even with the outer edge of each strip, and as long as is the foundation-board, nailed to the bench or table. Upon lifting it off you will have a shallow box without top or ends when turned over.

Now with a lead-pencil mark lines across the top at intervals, the distance between the lines being just the same as the width you wish your foundation after it is out. Now, with clinch nails, of suitable length, nail strips of the ¼-inch stuff across the top between the lines you have drawn, so that your shallow box need not split and fall to pieces after you have sawed through where you have markt the lines. Having these ¼-inch strips all nailed on, next, with a fine saw, cut through where each line appears, allowing the saw to cut down on the side strips to within ⅞ inch of their cut-off, and you have the foundation-cutting form complete, except that I would nail on to one end of the table or bench board a strip three inches high, so that when laying the foundation on the board for cutting, each sheet could be brought up to this strip, thus "evening" the ends so that all might be exactly alike.

Now lay on sheets of foudation till you have from six to ten sheets deep, according as you find most convenient for you to cut, and then lay the same number by the side of the first pile, for you will remember that we are to cut two piles at once.

Having the two piles of foundation all even and nice on the table or bench board, we now carefully place over it (and out against the guide-strip at the end which evens the foundation) the board having the saw-kerfs through it, when we are ready for the knife.

For a knife I prefer an old table-knife, such as our grandmothers used—one that has been worn till it is very thin, when the edge is made very sharp on an oil-stone.

Now to prevent the wax sticking to the knife was a problem on which I workt a long time. I was told by some to have the knife hot by keeping it in hot water; others advised the use of weak lye, honey, etc., all of which did not please me. Having a rag moistened with kerosene close by, and passing the knife over it before each stroke so as to moisten it with the oil, workt the best of any of these, and this plan was used until one day when I was in a great hurry I drew the knife through the foundation as quickly as possible, without bothering with any oil, when lo, and behold, the whole sticking matter was solved, for the friction caused by the rapid motion of the knife through the wax melted it to a sufficient extent so it did not stick to the knife at all.

To be sure I was right, I quickly drew the knife to the middle of the pile and stopt, allowing a few seconds to pass before I tried to go on again, when I found the knife was fastened and could not well be moved except by tearing the foundation. A later trial of several quick strokes with the knife and then suddenly putting it to the tongue showed that it was almost too hot to be borne without pain. I now have no more fussing with hot water, kerosene-oil, or anything of the kind, but draw the knife through the foundation just as rapidly as possible, when the cut edge of the foundation is left as smooth and shiny as though it had been melted in two. It is best not to bear down too hard in cutting, using two or three light strokes to cut through a pile of eight or ten sheets, rather than trying to cut through the whole at one stroke.

FASTENING FOUNDATION IN SECTIONS.

As to fastening into sections, I formerly used the brush or spoon plan of so applying melted wax that was spread on the foundation and the section at the same time, and in cooling it adhered to both. But of late I have used the heated-plate plan, by way of the "Daisy" foundation fastener, and I am satisfied there is nothing better. Onondaga Co., N. Y.

CONVENTION PROCEEDINGS

Proceedings of the Colorado State Convention.

REPORTED BY F. L. THOMPSON.

The 18th annual convention of the Colorado State Bee-Keepers' Association was held in Denver, Jan. 17 and 18, 1898.

REPORT ON HONEY ANALYSES.

The Committee on Honey Analyses made their report. Three samples of honey, two put up by a Denver firm, and one by a St. Joseph firm, had been purchast in the market, packt in the presence of two of the members, and sent to the State chemist, who analyzed them, and found that the Denver samples contained a considerable percentage of cane sugar syrup, and the St. Joseph sample was probably a solution of glucose with a piece of comb honey added. As a certain bee-keeper—a member of the Denver Bee-Keepers' Association—had stoutly asserted that the Denver firm was not guilty of the charge of adulteration, the Executive Committee, at a special meeting, decided to purchase a new set of samples and have them analyzed by another chemist. Accordingly the committee went together to the same business house where the previous samples had been purchast, secured another lot of honey put up by the same parties, and had them packt up ready for shipping by the clerk who sold them. The parcel was sent by express to an Eastern honey expert, who analyzed them with practically the same results as the State chemist had found. The agreement of the two analyses was considered sufficient evidence by the committee.

ROOM FOR HOLDING MEETINGS.

The committee on securing a room in the Capitol—E. Milleson—made the following report: "As a committee appointed to secure a room for the meetings of the State Bee-Associations, I desire to report that the Capitol building still remains under the supervision of the superintendent of the building, and he is disposed to do the best he can in furnishing a meeting-place for the bee-keepers of the State; but we hardly see the way cleared for a room for our exclusive use."

LAW ON SPRAYING FRUIT-TREES.

The committee on securing a spraying law—F. L. Thompson—reported that a law had been formed, and adopted by the last legislature, so that it is now in force. It is to be found in Section 15, page 65, of the Session Laws of Colorado for 1897, and reads as follows:

"It shall be unlawful for any person or persons to spray fruit-trees while in bloom, with any substance injurious to bees. Any person violating the provisions of this section shall on conviction before any Justice of the Peace be liable to a fine of not less than $5 or more than $50....The proceedings of the State Bee-Keepers' Annual Convention shall be filed with the Secretary of the Board of Horticulture, who shall edit it and file with the Secretary of State, who shall cause the same to be publisht annually with the report of the Board of Horticulture."

E. Milleson, who is the fruit inspector of Arapahoe county, said he thought there would be a revolution in spraying materials, by the use of insecticides harmless to bees, and also said that the poisons now used were so largely adulterated as to not even harm the larvæ.

S. M. Carlzen stated that a few of the horticulturists on the western slope, whose names he could not give, were making efforts to repeal the spraying law. This was confirmed by a letter from a western-slope bee-inspector, not read before the Association, which will appear later in this account of the proceedings.

SAMPLES OF HONEY-COMBS.

Pres. R. C. Aikin exhibited three sections containing septa of honey-combs, the rest of the comb and the honey having been removed, all built in the same super. One had been part natural comb, and part comb built on extra-thin foundation. The natural septum lookt much lighter on account of the color of the wax, but the difference in thicknesses was small. But chewing showed a difference in quality, that of natural comb being more brittle. Another section contained a septum resulting from the use of deep-cell foundation. In eating, no difference could be perceived between it and ordinary foundation. The third section had contained very heavy brood foundation. This had been much thinned, and the wax used in building up the side-walls, also some deposited where the cell-wall joins the base.

H. Rauchfuss also exhibited a septum of comb from deep-cell foundation, and some finisht sections in which deep-cell foundation, ordinary foundation, and Given rolled foundation had been used. Altho the Given rolled foundation was clumsy, the septum after completion was not so thick as that of comb from the deep-cell foundation. The latter was commenced sooner, but not finisht sooner than the other.

SUNFLOWERS FOR SHADING HIVES.

Mr. Varian recommended the Russian sunflower as furnishing shade to the hives just when wanted, and not sooner. As the seeds stand the frost, they could be planted in the fall. They will grow on poor soil. About six should be planted about a foot from the hive, on the south side.

Pres. Aikin then read his annual address as follows:

President's Annual Address.

Fellow Bee-Keepers and Friends:—It is a pleasure to me to be with you. A little over one year ago I thought likely I should never meet with you again, much less to serve you as president of this association. I am intensely interested in our pursuit, and as well in the welfare of each of you, financially, morally and spiritually.

I wonder how many of you are here because you love your neighbors. I think we may say that most of us are here through one or both of two general motives—love of self and love for others. I trust that not one is here through selfishness only; at least I hope not. Personally, I feel sure that these annual gatherings cost me more in labor and thought than all I can get out of them as a money consideration.

While it is true that we may get value received on a money basis, there are other ways in which we may get well paid. It is a pleasure to me to see your faces, to shake the hand, to talk of each other's welfare, and to try to help each other. Brethren, try to get all you can that will benefit you financially and morally, but let your getting be of that kind that worketh both ways, charitable and full of love. "Give and it shall be given unto you; prest down, and shaken together and running over, shall men give into your bosom. For with the same measure ye mete withal it shall be measured to you again."

Let us help each other. I know there is a large element in this world who would laugh at such advice and call it foolishness; but nevertheless the biggest fool of all is he who does not know the value of such advice. We are here to help each other—and ourselves. How can we best do this?

I believe it was two years ago that, in my address, I strongly urged this Association to a more thorough organization and co-operation. I again urge it. Trusts, combines, and monopolistic organizations are multiplying everywhere. Recently a trust representing millions of capital was organized to control one of our worst enemies—glucose. This is not the kind of organization I urge, for such a one is monopolistic, selfish, unkind, "giving that it may receive again." There is another kind of organization which is honorable and kind, that *receiveth that it may give*, and which we may call co-operation. Fellow bee-keepers, are not our hearts as one in this?

What shall be the work of this convention? How have you fared the past year? Tell us what you have produced, where and how you have sold it, and the remuneration. I find the burden of complaint to be "poor markets." We must not rest till something has been done to better the honey market. With laborers unemployed or poorly paid, with farmers and all classes of producers barely making a living, or going behind, there is no use to expect higher prices. Our duties in general as citizens have to do with many of the far-reaching influences that have to do with general conditions influencing morals and money, but as members of the Colorado State Bee-Keepers' Association, and as bee-keepers in general, we have duties toward each other in the pursuit. We may be able to concert our action and better pack and market our product, and thereby help ourselves in some points at least until such time as good-will shall prevail among all classes to the good of all.

I desire to point out in specialty some things this Association should do at this time. We have a constitution. Its limitations and regulations have not been properly observed. We must amend our methods or our constitution—both need amending. The constitution requires us to hold this, our annual convention, the third Monday in January, beginning at 10 o'clock a.m. This is too ironclad to best serve our interests. I recommend that this provision be amended giving us more liberty as to time of meeting, and that it be so modified as to be largely in the power of the executive to call meetings.

Besides this, there are other amendments needed in both constitution and by-laws. Sections 4 and 7 of the constitution need amending. Also sections 3, 5 and 13 of the by-laws. I will not here detail these matters, but so soon as you shall be ready to consider the matter I will point out to you what in my estimation is needed, when you can adopt or reject, as seems best.

Should you see fit to adopt amendments that I shall present to you later, I feel that then our organization will be on a more solid footing. It will then be in order for you to reach out to greater usefulness. I recommend that this Association do something toward the support of the United States Bee-Keepers' Union. I wish that every apiarist in the State were members of that association. Of course we want your membership in this Association, too, but you should not neglect the other. An advance of ½ cent per pound on 500 pounds of honey would far more than pay your dues in both organizations, and I believe that a conscientious support of both would benefit you several times over all it would cost you.

In order to advance co-operation a better statistical plan is needed. I therefore recommend that you make arrangements by which our secretary and other officials of the organization may get into communication with apiarists in all parts of the State; and to facilitate this, provision should be made for printing return cards so that all the apiarists would have to do would be to fill blanks and mail, this Association doing the rest. In this and connected directly with it should be a sort of information bureau whereby apiarists may be informed of crop and market conditions.

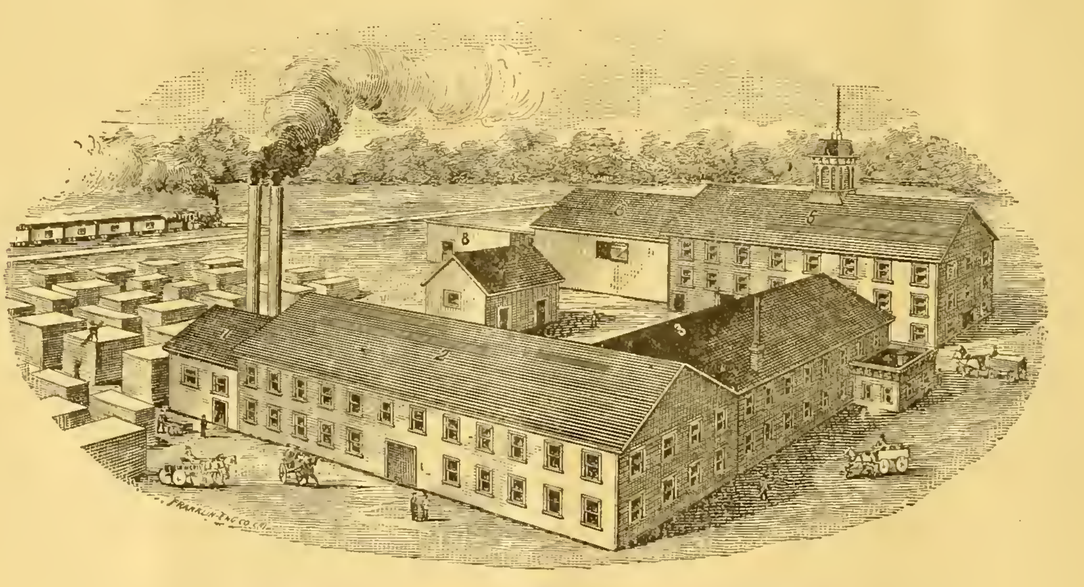
I believe that our State should be well represented at the Trans-Mississippi Exposition at Omaha. Considering the work that we should do at home, and the very low state of the Association's financial condition, I cannot recommend that our funds be applied in that direction. However, I appeal to the apiarists of the State to do what they can in that direction outside of the Association, and should the bee-keepers rally to the support of the Association, we may also do something as an Association. Our State produces both quantity and quality, and we ought to be represented.

I appeal to the apiarists of the State to stand by your Association in both moral and financial support. Your officials are willing to execute for you at a cost of both time and means if you will but give them the proper backing. Stand by this Association, for in helping it you help yourselves. Co-operative organization is just, proper, and to be desired for the good of all.

Defensive organization is a necessity to protect ourselves against common enemies. Do you not know, fellow apiarists and all classes of producers, that a large element of mankind—perhaps I should call them by a less dignified name—are planning, yes, even deliberately plotting, in many cases, to induce or compel you to divide your earnings with them? There are non-producers—many of them—who are abundantly worthy of our support, they are necessary in the social economy, and we sin if we do not duly support them; but the monopolistic and unfair grabbers, and above all the parasites who feed upon honest productions, must be gotten rid of.

Dear friends, let charity prevail. Do a labor of love, so loving the right and hating the wrong, that no wrong-doer can stay among us and continue to do wrong. May our motto be harmonious and persistent action, *action*, ACTION.

R. C. AIKIN.



Bee-Supply Factory of E. Kretchmer—One of Our Advertisers.

The Secretary next read his report, as follows :

THE SECRETARY'S ANNUAL REPORT.

At the last annual meeting your Secretary was instructed to request the publishers of Gleanings in Bee-Culture to withdraw the quotations of a certain firm dealing in honey in this city. After considerable correspondence, and even after they were informed of the result of two different analyses, they still preferred to continue their quotations, saying they wanted more analyses made. But as this Association is not in a position to waste any money for this purpose, it was thought best to let the matter rest.

During the last session of the legislature a law had been past to have our report printed with the Horticultural Report. Accordingly I prepared a very complete report of our proceedings, and had the same turned over to the Secretary of the State Board of Horticulture, Mrs. Martha A. Shute, but I have been informed lately that there are no funds available for the printing of the same.

During the past season communications were received from Florida and also from the United States Department of Agriculture for copies of our foul brood law, which were furnisht.

As there was a glut in our honey market during the latter part of the summer, I have tried to be of some assistance to my fellow bee-keepers in finding an outlet for this surplus, and have met with fair success.

I have also received communications from the officers of the Trans-Mississippi and International Exposition in Omaha, inviting the Association to make an exhibit at that place.

On account of lack of funds certain lines of work, as the collection of honey statistics, etc., could not be carried out. I hope the past favorable season will revive the interest in Association matters among bee-keepers, and result in a largely increast membership. FRANK RAUCHFUSS, *Sec.*

COMMITTEE ON PERMANENT EXHIBITS.

A committee on permanent exhibits, consisting of R. H. Rhodes, J. E. Lyon, H. Rauchfuss, J. B. Adams, and Mrs. M. A. Shute, was appointed, and reported that they had some assurance of having cases furnisht to be placed in the Capitol Building.

A letter dated Jan. 11, from Vice-Pres. W. L. Porter, at present in Los Angeles, Calif., was read, which is as follows :

CONDITION OF THE DENVER HONEY MARKET, ETC.

I have been requested to write on the condition of our honey market—its present demand and supply. At the present time the demand for honey in Denver is very slow. Dealers all complain that it is getting very slow. Perhaps this may be on account of Holiday trade, and it may be better soon. The supply seems to be ample. Houses that are dealing in honey say they have ample stock to last through the year. Dealers have told me that in the past week, in order to move honey at all, they were compelled to sell at $2.00 per case, the same price they paid for the honey.

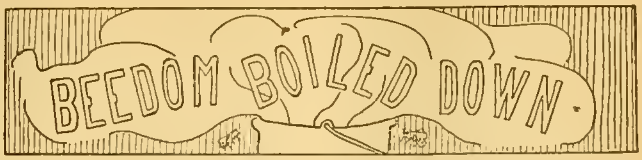
It is very evident that the demand is too small, or the supply too great, for bee-keepers to secure a living price for the product of their apiaries. Through the joint effort of a few of the leading bee-keepers several carloads of honey have been shipt East, from the Denver markets; and it is evident, if we wish to sustain a fair market, this must be done in the future. As no one bee-keeper produces honey extensively enough to ship alone, co-operation is necessary, and it is to be hoped that the State Association may get in shape to do it for its members. You may depend on my hearty co-operation.

I have been attending the California association. There was a good attendance of wide-awake and energetic bee-keepers. The meeting was a very interesting one. Mr. Cowan was present and gave a talk on bee-keeping in England ; the remarks were very instructive. The Association took action on the uniting of the two Unions. The vote was unanimous that the New Union should absorb the Old, and the Old should wind up its business and cease to be. It would seem to me to be wise for our Association to pass a similar resolution. They also past a memorial to Congress to give us a pure food law, and a committee was appointed to draw up a resolution and present the same to the Secretary of Agriculture.

W. L. PORTER.

[Continued next week.]

Every Present Subscriber of the Bee Journal should be an agent for it, and get all others possible to subscribe for it. See offers on page 255.


BEEDOM BOILED DOWN.

Delayed Laying.—M. Gillet says, in Revue Eclectique' that he had a queen not fecundated till 29 days old, commenced laying three days later, laid only drone-eggs for nine days, then worker-eggs.

Making One's Own Supplies.—Gleanings' Strawman says : "Doolittle advises a good workman with the necessary tools to make all his needed wares after starting, except sections. Doolittle ! I'm a good workman, and I can borrow what tools I lack, but if I can get a job of sprouting potatoes at 10 cents an hour I believe I can save money to buy my hives and other 'fixins.'"

Spreading Brood, as usually practiced, by inserting an empty comb in the center, is condemned by H. W. Brice, in the British Bee Journal. His plan is to wait till the bees completely cover the frames on which they are clustered, then put, only on one side, an empty comb next to the last frame of brood. In a few days put an empty comb on the other side, but in no case put an empty comb between two frames of brood.

Foundation in Sections.—The report of the Ontario experimental apiary says the results of a very thorough and extensive test made with different amounts of foundation in sections, show that it is important that the sections be filled to sides and bottoms, otherwise there will be more pop-holes and the comb will not be fastened firmly to sides and bottom. Foundation running about 12 feet to the pound was most readily accepted by the bees; when thinner, there was greater tendency to pop-holes and gnawing down.

Plain Sections in Canada.—Editor Holtermann bluntly says, "I think that the plain section is a decided humbug." He says, "We are turning out our new sections this year in one piece, with the top and bottom-bar cut clean away in the corners." At the Ontario Convention J. B. Hall objected to the plain section because of the danger of making the combs bleed in handling. F. A. Gemmill replied that when you take hold of a section with a plain top-bar it's all the same as a plain section, and he thinks a nicer looking section can be produced with a cleated, perforated separator. Editor Holtermann thought it might be practicable to have a bee-space on one side and not on the other, but when it comes to having it on either side he predicts failure.

Stimulative Feeding, or "speculative" feeding, as the Germans call it, is discust by W. Fitzky, in Centralblatt. He cites the opinions of various authorities, who are by no means in entire accord. Gravenhorst says with weaklings it does more harm than good, but judiciously managed by the experienced bee-keeper, it produces profitable results with strong colonies. Kilchling says beginners cannot be warned too earnestly against it, for if bad weather comes, the bees, excited by the feeding, fly out in numbers, and instead of being strengthened, the colony is weakened by means of the bees that are lost. "Biene und ihre Zucht" says, under certain conditions of pasturage, the experienced can use it to advantage. Herr Fitzky adds that stimulative feeding is an art to be learned by practice.

Killing Old Bees in the Fall.—Mr. Alpaugh moves a hive in the fall to a new location, sets a top story on the old stand to catch the returning old bees, then destroys them. He thinks the colony winters better for the depletion. The old bees die in the winter, and he thinks some young bees are lost in dragging them out. J. B. Hall is somewhat of the same mind. He doesn't want any more bees in a hive than will take good care of the queen and be ready to make a good start in spring. Beyond that he thinks they only consume honey. If two colonies are to be united in the fall, he just takes the combs from one and lets the bees die.—Canadian Bee Journal. This seems just a little on the line of the practice of—was it Hosmer?—a good many years ago, killing off bees so as to have only a pint or a quart to winter. Quite a bit of talk about it at the time, but no one else seemed to succeed at it, and it was given up. Possibly killing off the *old* bees is the secret of success.

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

"**A Journal** that is bright, wide-awake, vigorous, up-to-date, and full of ideas that help arouse the reader to better deeds, can be forgiven almost any failing."—Review.

All right, we feel forgiven, for so many of our readers have told us that they consider the American Bee Journal just that kind of a journal. Next.

◆

Bee-Supply Branches.—It is surprising to note how many of the large manufacturers of bee-keepers' supplies have within a few years establisht branches in various parts of the country. It seems to be growing as a fad with a firm that has their big headquarters somewhere, to have a whole lot of their smaller hindquarters scattered almost everywhere. We believe the practice will not be so very profitable in the long run. Some day there will likely be a gathering together from "all quarters," to the profit of all concerned.

◆

An Unfortunate Bee-Keeper.—We have received the following from Mr. C. P. Dadant, in regard to a bee-keeper and family who are destitute through the recent awful Shawneetown, Ill., flood:

MR. EDITOR:—Your readers have undoubtedly all read about the terrible disaster at Shawneetown. But, like myself, most of them have probably not thought much farther about it, and altho quite willing to lend a helping hand, they have failed to find the opportunity to subscribe to help the sufferers.

It now appears that one of our brother bee-keepers, and a very deserving one, is among the sufferers, and I take the liberty to present the facts to the bee-keeping fraternity.

Mr. Thos. McDonald, of Shawneetown, was accidentally paralyzed in the hip and legs by falling from a building in 1895. He has since been unable to work, being confined to a wheel chair, and his apiary of 200 colonies, and a few milk cows that he owned, were managed by his wife and daughters. They were, in this way, making a good living in spite of his position and inability to work.

The flood of Sunday evening, which destroyed the entire town, drowning over 100 people, deprived him of all he had. They lost their home, their cows and their bees, saving only their lives. Friend bee-keeper, is this not a case deserving of our help? The bee-keeping fraternity is a sort of free-masonry, an occupation apart from all others. Let us do as other brotherhoods do, help our suffering ones, remembering that our turn may come to suffer. Let no one hold back because he can give but little. It is the little drops of rain that make the mighty rivers.

If Thos. McDonald can get help enough to buy a few bees he can keep out of the poor-house. Bee-keepers, let us hear from you! C. P. DADANT.

In a private letter Mr. Dadant suggests that the contributions be sent either to us or to Mr. McDonald direct. But we believe it would be better to forward all to Mr. C. P. Dadant, Hamilton, Hancock Co., Ill., who doubtless will be glad to turn over the total amount, and see that it is properly used, as he vouches for Mr. McDonald's worthiness. We forward our own contribution to Mr. Dadant at once, and trust that all who feel able to do so will send now, so that our suffering brother and family may be able to start with bees again in time to do something this season, which is now at hand. All contributors and their amounts will be publisht in the American Bee Journal later on.

Let as many as can send $1.00 each. More if you can do so, or less if not able to send so much.

◆

Grading or Sorting Comb Honey.—How often we have been deceived in honey the past year. We have bought lot after lot, that was very beautiful next to the glass, but back of that—well, it was simply fraudulent putting up, that's all. What good excuse can there be for putting well-filled, white and tempting sections of honey in the outside row, and then filling up with partly-filled, half-sealed sections?

We should like to see the practice come into vogue, of the producer putting his *name*, county and State, on every case of honey shipt to a city market. It would be infinitely to the credit of the ones who were honest in the putting up of their best grades; and the other fellows would suffer by the practice, as they justly deserve.

There ought to be an advance made this year along the line of a more honest grading or sorting of comb honey for market. Dealer and consumer would alike rejoice.

◆

The Langstroth Monument Fund.—Mr. E. S. Lovesy, President of the Utah Bee-Keepers' Association, sends us the following suggestions on the proposed monument to be erected to the memory of Father Langstroth:

FRIEND YORK:—I have received information that a proposition has been made to erect a Langstroth monument at a cost of about $75. As a bee-keeper I do most emphatically protest. Shame upon us, if 100,000 or more bee-keepers in the United States cannot do better than this in honor of our beloved friend—the greatest of all American bee-keepers. The trouble is not a lack of generosity on the part of our bee-keepers, but a careless indifference or lack of interest in the matter. We can and must do better. Then let us be up and at it, till the noble work is done.

I move that a committee of five or more bee-keepers be appointed by the officers of the United States and National Bee-Keepers' Unions, to find out where the best and most substantial monument can be had at a cost of about $500; said committee to also receive inscriptions and select one from among those received to be placed on the monument; and that they also be authorized to agitate the matter until the work is completed in a manner that our bee-keepers will not be ashamed to visit the last resting-place of our long-to-be-remembered friend, L. L. Langstroth. E. S. LOVESY.

No doubt many said while they were reading the foregoing, "Why, I'll second that motion." We believe that $1,000 could be raised as easily as $500, if the matter were pusht by a competent committee.

In order to get it started, we will suggest what we think would be an excellent committee, to be known as "The Langstroth Monument Committee:"

Hon. Eugene Secor, Forest City, Iowa, General Manager of the United States Bee-Keepers' Union, chairman.
Thomas G. Newman, San Francisco, Calif., General Manager of the National Bee-Keepers' Union.
Dr. C. C. Miller, Marengo, Ill.
G. M. Doolittle, Borodino, N. Y.
Mrs. L. Harrison, Peoria, Ill.

Now, why isn't that a fine committee? In it are represented the two Unions, and three of the oldest and best writers on apiculture, one of them to represent the "dear women" bee-keepers. What more do you want?

If this committee shall be the one selected to undertake the work, and provided they accept, we suggest that they at once issue an address to bee-keepers, to be publisht in all the bee-papers, and that hereafter contributors be requested to forward all moneys to them. Contributions can be sent to any one of the five members, and all be forwarded finally to Chairman Secor, who would be authorized to pay it out when the monument is selected, placed in position, and the work approved.

We believe The A. I. Root Co. have in hand about $75 that has been contributed toward to Monument Fund, and we have $10 lately sent to us. If the matter were taken up at once and urged as it deserves, we think that by Oct. 1, 1898, the desired amount could be raised and the monument erected this year.

Provided this matter is taken hold of and workt as it ought to be, our own further contribution of $5 will be made.

* * *

Produce Only the Best Honey.—High aims are always to be encouraged everywhere. Why not in the production of honey, and especially that in the comb? It is our opinion that too much of the inferior grades are put upon the markets, and particularly city markets. We have been greatly surprised at some—yes, a good deal—of the comb honey we have seen in the Chicago market the past year. We truly believe there was but a small percentage that was really fancy honey.

Now it seems to us that with the experience of added years, and with all the present-day improvements in bee-keeping appliances, better-appearing honey ought to result. Bee-keepers should not be satisfied to place before consumers, year after year, inferior looking honey, ragged-edged, and with corduroyed sides, but our aim should be to produce as even and squarely-built sections of honey as we possibly can, trying to improve as the years come and go. We ought to make the effort, at least.

* * *

Honey for Burns.—A 4-year old boy was badly scalded, and in despair his parents had recourse to the old domestic remedy—honey. Six pounds of honey were dissolved in warm water, with which the parts were several times bathed. The pain departed at once, and the boy rapidly recovered. This is reported in a German paper. It does not seem to make much difference whether you put honey on the inside or the outside of a person, it is alike beneficial.

* * *

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for $1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at $1.00), and 10 cents extra.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Unpainted vs. Painted Hives.

What do you think of unpainted vs. painted hives, as stated by Mr. Doolittle? IOWA.

ANSWER.—Mr. Doolittle says he wouldn't allow his hive-bodies to be painted if any one would give him a dollar a piece for it, for it would make a difference of $2.00 each in the development of brood in spring. I don't know how exact those figures may be, but I've so much faith in the general principle that I haven't painted a hive for many years, except to paint the covers.

Foul-Brood Treatment.

1. My bees are troubled with foul-brood, and I got Dr. Howard's pamphlet with McEvoy's foul-brood treatment. Is his treatment the best to cure foul-brood, and is it as good or better than the starving plan?
2. Also, could I use the honey that was in the hive where there was foul-brood, to feed the bees, if I boil it well? N. JERSEY.

ANSWERS.—1. You can probably do nothing better than to follow the plan mentioned, which is practically the same as the starving plan, as it uses up all the infected honey before any can be fed to brood.
2. Yes, only such honey will not be fit for winter.

Crimson Clover as a Honey-Yielder.

We have been having ideal spring weather for about a week now, and the bees are working like trojans. They are about a month ahead of what they were last year, and if the weather does not take a change for the worse, I will have honey in the sections within a week, which is something unusual for this section. I would like to know the honey-producing quality of crimson (not red) clover, as compared with white clover. There is about 100 acres of it on all sides of me, and if it yields much nectar, I should have a good crop of honey. There is also a good lot of white clover in my vicinity; saw the first blossoms on it yesterday (March 18.) I have a good stand of sweet clover, planted as an experiment, and will report later how it turns out. Please advise me as to the crimson clover as early as possible. I might mention that the bees work on it very freely. GEORGIA.

ANSWER.—You are the very man to give something definite about crimson clover, and it is to be hoped that you will keep your eyes wide open to tell us all about it as soon as it gets through its principal blooming. Reports so far say it is a great yielder, and there can hardly be any doubt on that score in the mind of any one who has seen the bees at work on it. I do not know whether any one as yet has had so large a quantity of it in one place as to be able to say exactly as to the quality, the supposition being that it is excellent, and on this point you ought to be able to enlighten us. As it comes earlier than the other clovers, with 100 acres you probably ought to be able to have it unmixt with other honey. Be sure to report.

Question on Transferring.

I am a beginner, having only had bees last summer, and getting out of health during the honey-flow and ever since, I have not done them the justice that I might. I got 24 old hives with bees, and some empty in addition, increast to over 40, commencing the winter with 39, which are good now; one was short of "funds," so I to-day exchanged two empty for two full combs, with another.

1. What I want to know is, your opinion of the best way to change the bees from seven or eight hives of old patterns, in which the frames are lockt and crooked. I wish to get them into standard eight or ten-frame dovetailed hives. I have seen several methods described, and I am not satisfied with any given in books or papers. Could I not set the hives (old and new) one on the other, and drive the bees into the fresh hive until I knew the queen was in the upper new story, then put a queen-excluding zinc between them, and in a few days make the entrance at the upper story and close the lower, and by thus doing induce them to leave the old hive nearly empty of everything but old comb, and make one excessively strong colony? Or, would the bees insist on filling the comb in the old hive full of honey as the brood hatcht out? If they would not fill the old story tight full, the combs could be cut out and melted down with little trouble. I judge they would when treated thus, cut out any queen-cells there were in the old story when the new one was added and the queen sent upstairs. If they would not do so, the simplest way, of course, to avoid trouble and

get good results, is to make a "drive," and put the new hive on the old stand, and turn the other and shift it a few times; but that will not turn all the bees into the new hive, so the process will have to be repeated, and if I repeated it after the new queen was hatcht. I think the swarm would be too poor to do any good.

2. If they turn to queen-rearing and swarm, which hive would you leave on the old stand, and which will give the best returns in comb honey? COLORADO.

ANSWERS.—1. Your plan might work and it might not. In several instances I have put an excluder over the hive with brood, having the queen in the empty story above, and they sulkt a long while—in one case the queen just wouldn't lay at all, altho kept there for weeks. If you put a frame of brood from some other hive in the upper story, you may make the queen lay all right. There is danger that the bees will fill the combs below with honey, but you can help the matter by closing the lower entrance. Then you can gradually increase the opening between the two hives, say after about a week, and when the opening becomes too large to suit the bees, they'll not be likely to want to store anything below, but you must be sure they have abundance of room above. They'll not be very likely to start queen-cells below.

2. Leave the new hive on the old stand and you'll probably get more comb honey, for if you leave the old hive there, they'll be likely to swarm again.

Managing Swarms.

I will tell you how I would like to manage my bees (all that will swarm) and see what you think of it. That is, when a swarm comes out I intend to kill the queen (all clipt) and have the bees come back again to stay. Is this a good way, or not, for comb honey? If so, at what date would you cut queen-cells? In this way of managing, say a queen is extra prolific, I would cage her instead of pinching her head off. Where is it best to keep the caged queen in the hive, and how long? PENN.

ANSWER.—Your plan is a good one *if*. And a good deal hangs on that if. If you cut out all cells but one before the first one hatches out, and if you miss no cells, and if you select the best one of the lot, and if there is no brood in the hive young enough to be grown into something in the semblance of a queen, you're all right. Perhaps seven days after the issue of the swarm will hit the first and the last conditions, and you'll have to run the risk of leaving the best cell and not missing any. Possibly it might be still better to listen at night for the first piping, which may be in seven or eight days, then in the morning before the bees have time to swarm, cut out all queen-cells. That's safer than to make your choice of cells, so far as the quality of the queen is concerned, and you are not likely at that time to have any unsealed brood. The chief danger is that you may miss a cell.

At that time of year you can keep a caged queen almost anywhere where the bees can get to her to feed her. A handy place is to stick her in the entrance of the hive. She may be kept caged for weeks, but after being caged too long she may not be worth much. Perhaps caging a week or two will not hurt her.

Best Size of Hive—Spacing Frames—Best Section and Separator.

1. What size of hives do you consider best, and which is the best brood-frame?

2. How would you space the brood-frames so as to make them self-spacing? Would you advise closed-end frames, or would you space them with small staples put into the end-bars? If the latter, where should the staples be put?

3. What is the best honey-section to use, and best separator, the fence, board or tin? WISCONSIN.

ANSWERS.—1. It's a very difficult thing to say what size of hive is best. For one who expects to give much attention to his bees, I'm inclined to favor 8-frame hives, as they can be increast anywhere up to 16 frames by having two stories. If little attention is to be given to the bees, probably a 10 or 12 frame hive is better, for there's more danger that with the 8-frame hive the bees would be left in one story with not enough stores for winter. It isn't any where nearly so important to have hives of the same kind as it is to have only one size of frames. You can have 8-frame, 10-frame and 12-frame hives in the same apiary, and find little trouble from it, and you may have different *kinds* of frames, but when you have different *sizes* of frames, then the trouble begins. The nearest of anything to a standard frame is 17⅝ long and 9⅛ inches deep, outside measure. I had frames by the thousand that were ⅜-inch shorter and ⅛-inch shallower, and the difference doesn't amount to anything only that it isn't the standard size, and as fast as I get new frames they are the standard size.

2. I believe closed-end frames are best for the bees, because warmer; but they are troublesome about killing bees, and about being glued together. For spacing, staples are good, and yet I prefer a common wire-nail with a head about 3-16 inch across, the nail being driven in all but ¼ inch. That spaces the frames 1⅜ inches from center to center, top-bars and end-bars as well as bottom-bars being 1⅛ inches wide. Staples or nails can be driven in the top-bar near the end-bar, and in the end-bar perhaps 2½ inches from the lower end. Only four spacers are needed on a frame, two on one side at one end, and two on the other side at the other end. When you hold up a frame before you, there are no spacers at the right hand end on the side next you, but on the side away from you, at the left end, the spacers are on the near side. An objection to nails for spacers, and even to the frames I have described, is that they are not regular goods, and have to be made specially to order. But if you start with a frame of the right size, it isn't such a hard matter to change the kind any time.

3. The standard section at present is the 4¼x4¼x1⅞ with insets cut for bee-passages, to be used with plain separators—wood separators if they are to be used loose as in the T super—tin if to be nailed fast as in wide-frames or section-holders. The plain section and fence are now on trial, and only that trial will determine whether they should be adopted exclusively or not.

Making Increase by Division.

Of 14 colonies, three died during winter. How would this do, to get three built up to take their places? About May 1 (or would it be safe sooner) if we have an early spring, take a well-populated colony and divide, leaving the queen and two frames in the old hive; of the balance of the frames in this hive (six in number), put two each in three hives, with adhering bees; at the end of ten days cut all queen-cells and introduce queens. I want to get some new blood in, anyway, and would get queens from outside. Of the old combs left by the dead colonies, I have 18, fairly well-filled with honey, to give to the nuclei, as they need it. What would you do different from above? OMAHA.

ANSWER.—Sorry to disagree, but I just wouldn't do anything of the kind. Let me explain a little, and then I'll be obliging enough to let you do as you please. It's the number of bees that count in a honey harvest rather than the number of colonies. When the honey harvest comes, I'd rather have an apiary containing 300,000 bees than one containing 400,000, *if* the 300,000 are in five colonies and the 400,000 in twenty. That's a proposition by itself. Here's another: If you make four colonies out of one May 1, the probability is that three weeks later you'll not have as many bees in the four colonies as you would have had in the one, if you had left it undisturbed. Until the queen gets up to about her limit of laying, it will be a losing game to divide. For 40,000 can take care of more brood in one hive than they can in two, and so long as the queen can lay more eggs than they can care for, what would you gain by dividing? So I believe I'd rather wait till the queens got to about their limit of laying—perhaps about swarming-time—then take a frame of brood and bees from each hive, making three fairly good colonies at the start, and not materially depleting any one of the 11.

Raising Hives from the Bottom-Board—Zinc Separators—Corn Syrup for Stimulative Feeding—Making Wax Sheets—Introducing Foul Brood with Queens.

1. I read so much about raising hives from the bottom-boards by means of blocks under the corners for ventilation and to discourage swarming. Is there no danger of robbers by having so much opening? and are there not a great many bees lost when the blocks are taken out, as the bees have been accustomed to enter from the sides and rear of the hive?

2. How would separators made of queen-excluding zinc do? They would be nicer and more durable than the fence-separator, and would take up less room.

3. I can buy nice, clear, almost tasteless corn syrup for 18 cents per gallon. How would that be for spring stimulative feeding, by adding part sugar or honey?

4. Is there any other method by which I can make wax sheets for foundation, than by using dipping-boards?

5. Is there any danger of introducing foul brood by sending for queens from any of the advertisers in the Bee Journal? I am wintering 42 colonies in the cellar; so far they seem to be all right, and I am anxiously awaiting spring when I can give them their liberty, for I love to see them at their work and hear their merry hum. I am very fond of reading the Bee Journal, and all bee-literature, of which I have stacks. WISCONSIN.

ANSWERS.—1. The hives are not raised till colonies are very strong, and I never knew of any trouble from robbers on account of the blocks. Theoretically I should be more afraid of bees being troubled to find the entrance when the hive is let down, but practically I've had no trouble. It isn't far, at most, to the front entrance, the call is there, and it's nearer than to any other hive. Besides, you may have noticed that wherever bees start to use the entrance at the beginning of the season, that's the part they'll continue to use, even when other entrances are given. By the time the hive is raised, the bees have establisht the habit of using the front.

2. They wouldn't be bad, but rather expensive, and colder than wood.

3. Some years ago it was tried, but I think it was finally condemned by all.

4. Perhaps none practicable, unless it be something like the Weed process, which is patented.

5. No honest man would advertise queens whose bees had foul brood, and I'm sure the Bee Journal would not knowingly accept such an advertisement, but of course there's no way by which it can be absolutely certain of all its advertisers.

☞ See "Bee-Keeper's Guide" offer on page 205.

Sweet Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order·

	5lb	10lb	25lb	50lb
Sweet Clover (white).	.60	$1.00	$2.25	$4.00
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Add 25 cents to your order, for cartage, if wanted by freight.

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Southern Home of the Honey-Bee

Is now ready for your orders for QUEENS of either **3 or 5 Banded Italians and Steel Gray Carniolans.** More than 300 Tested Queens to begin with. Untested, either race, 75 cts. each; June and until October 50 cents each. Tested $1.00 each. Good Breeders, $2 each. Straight 5-Banded or "Faultless" Queens, $5.00 each. Satisfaction guaranteed.

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GENERAL ITEMS

Bees at Work.

Bees were working lively yesterday and to-day on the box-elders. Peaches, pears and plums are just opening their bloom.

D. C. McLEOD.
Christian Co., Ill., April 11.

Wintered in Good Condition.

My bees came out of winter quarters in good condition. The weather is cold and backward.

W. A. SAUL.
Crawford Co., Iowa, April 7.

Bees in Fine Condition.

We are having good weather now. The snow is off the fields around here, but it is raining to-day. My bees are in the cellar now, and in fine condition.

GEORGE H. PORTER.
Hamilton Co., N. Y., March 14.

Cold Weather in Kentucky.

We have been having some very cold weather the past two weeks. The mercury has been as low as 22°—something unusual for old Kentucky. It has been hard on the bees. But it has the appearance of better weather now.

W. S. FEEBACK.
Nicholas Co., Ky., April 12.

Midwinter—Not Midnight.

Please correct a typographical error that crept into my previous article on page 194, second column, the seventh line from the bottom, where your typo makes me say: "I once had a half-barrel of cappings which had been neglected till *midnight.* Did I write "midnight" or "midwinter"? I am perfectly willing that you should give your readers the impression that I am fond of working, whether it is true or not, but don't let them think that I work till "midnight" without absolute, urgent necessity.

Hancock Co., Ill. C. P. DADANT.

[Yes, you are right, as usual. It must be our compositor had been out until midnight the night before putting your article in type. We have been quite ready to give you all credit for being industrious, but would hardly go so far as to think you would work until midnight in rendering wax.—EDITOR.]

A Soldier Bee-Keeper's Story.

It is not necessary for me to say that I appreciate the American Bee Journal—my subscription money tells that. I am an old soldier, and have handled bees more or less all my life, but I had never gotten right down to business until within the last three years. I started with one colony, bought eight more, and now have 70, all in good condition.

While I was a soldier in camp near Nashville, Tenn., I was nearly dead with camp diarrhea. December 25, 1862, we were ordered to move on the enemy at Stoney River. My captain carried my knapsack, and I trudged along and made out to keep in sight of the regiment. That evening, about dark, we went in camp near a residence of a rich old planter on a nice clover pasture. After stacking arms, I took a camp kettle and started down through a cotten patch for water. I had not gone far when I discovered some soldiers a little way from me. It was so dark I could not tell what they were doing, so I paused a moment to see if I could learn what they were at. Soon I heard a voice, "Do they sting?" This aroused my love for honey, and I went to them and found they had three old-fashioned round log hives, the heads knockt off, and the bees holding the party at bay. I askt the privilege to join them, and they

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Given as Bounties to purchasers of the improved Danz. Hives and Sections See schedule in my bee-book "Facts About Bees." Tells how to produce honey that sells for the most money. Free for 2c in stamps. Address

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Best honey-gathering strain in America. Tested, $1.50. Untested, $1.00. Write for a Circular. **J. D. GIVENS, Lisbon, Tex.**

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Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class Hatcher made.

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Circulars free. Send 6c. for Illus. Catalogue.

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All elevated trains on the loop now stop at Nickel Plate Depot, Van Buren St. Station. Call up City Ticket Office, telephone Main 3389, for lowest rates to all points East. (7)

told me to help myself. I took from my pocket a long dirk-knife, and soon filled my kettle with nice poplar honey, and assisted them in getting what they wanted, as I soon learnt they were not accustomed to handling bees. When I returned to the camp-fire my orderly sargent had gone to the house to see if he could get a warm loaf of bread. I took our canteens and went for water, leaving my kettle of honey at the camp-fire. When I returned the orderly had gotten back and reported that a corn-meal pone of bread was under way, and as he returned past the barn he said a great big fat hen tried to peck him, so he arrested her. We gave the hen a trial, and decided she was guilty, and we broke her neck. You never saw as happy a set of soldiers in your life, as we were that night, sitting around our cracker pot-pie, kettle of honey, and our pone of corn-bread. To tell the truth, I entirely forgot that I was nearly dead with camp diarrhea, and I have not had it since. The honey, fat hen, and corn-bread made a final cure. I can recommend this prescription, for I carried my knapsack after that, went through the battle at Stoney River, lay on the cold ground, waded Stoney River to my arm pits several times, and underwent the privations common to war, and have never had the camp diarrhea since.

Pardon me for this lengthy army story—my object was to give honey what it merits as a medicine as well as food.

Kittitas Co., Wash. S. W. Maxey.

Early Spring—Fair Prospects.

I have 15 colonies wintered on the summer stands. All are in good condition, and are bringing in loads of pollen, gathered from the soft maple. Indications are that we will have an early spring. Prospects are fair for a honey crop this year.

Albert Ziegler.
Huntington Co., Ind., March 21.

Wintered Well.

My bees wintered well, and have plenty of hatching brood at the present time. I enjoy reading the American Bee Journal.

W. Read Chamberlin.
Johnson Co., Iowa, March 24.

Good Season Expected.

I wintered 40 colonies, and they seem to come out all right. I had them in the cellar. Last season was a poor one here for honey, but I think we are going to have a good season here this year. We have plenty of basswood, but for some reason or other we have not had any honey from it for three years. The best I have done is 127 pounds of honey from a colony, and the poorest—well, down to nothing. Success to the "Old Reliable." G. Johnson.

Clark Co., Wis., March 25.

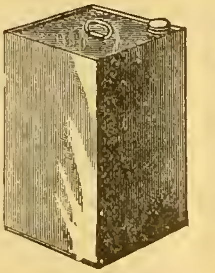
"Divider" in Producing Comb Honey.

I will try to answer Wm. Golden's article on page 187. He says: "After quoting what he says in his article on page 51." I confess I cannot answer that; I don't understand it. Then follows a quotation that is garbled, and the meaning destroyed. I will not give it here, but ask Mr. Golden to kindly compare it with the original, on page 51.

Mr. G. asks: "Why is it that the bees must be compelled to enter thus?" Answer: Simply because the divider affords two bee-spaces, and if the bees are allowed to go outside the follower, if one be used to fill up space, then there will be three bee-spaces—one too many, you see.

I may say right here, that I have on a large scale tested two, three, and even four bee-spaces at the sides of the section-supers, to my own conviction that while two, properly provided are of great advantage, any more than two tend to harm. And that is my reason for giving the caution with emphasis.

Mr. Golden's next question—"I have thought a good deal about it, and can hardly



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We can furnish **White Alfalfa** Extracted Honey, in 60-pound tin cans, on board cars in Chicago, at these prices: 1 can, in a case, 7 cents per pound; 2 cans in one case, 6½ cents; 4 cans (2 cases) or more, 6 cents. The Cash MUST accompany each order.

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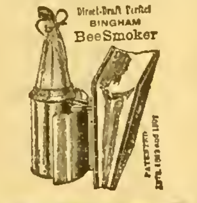

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Smoke Engine (largest smoker made)	4-in. stove.	Doz. $13.00;	each, by mail,	$1.50
Doctor	3½ in. stove.	Doz. 9.00;	"	1.10
Conqueror	3-in. stove.	Doz. 6.50;	"	1.00
Large	2½-in. stove.	Doz. 5.00;	"	.90
Plain	2-in. stove.	Doz. 4.75;	"	.70
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Honey-Knife		Doz. 6.00;	"	.80

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FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.
January 27, 1897. Truly, W. H. EAOERTY, Cuba, Kansas.

Mr. Bingham, Dear Sir:—Please send per mail a 4-inch Smoke Engine. I have one of your Smokers; it is too small in time of trouble.
February 21, 1898. A. F. SEWARD, Riverside, Calif.

9A9t T. F. BINGHAM, Farwell, Michigan.

Page & Lyon Mfg. Co. New London, —Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

Please mention the American Bee Journal. 7Atf

DR. PEIRO,

CENTRAL MUSIC HALL, CHICAGO.

Please mention Bee Journal when writing.

COMB FOUNDATION Wholesale and Retail.

Working Wax into Foundation for CASH **A Specialty.**

Hives, Sections, and a full line of Supplies. The **best** of everything. Write for Catalog. with prices, and samples of Foundation and Sections.

BEESWAX always wanted for cash or trade.

GUS DITTMER,
AUGUSTA, WIS.

ONE MAN WITH THE UNION COMBINATION SAW

Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing, Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery. Sold on Trial. Catalogue Free.

SENECA FALLS MFG. CO.,
46 Water St SENECA FALLS, N. Y.

Basswood Honey FOR SALE

We have a limited number of barrels of **very best Basswood** Extracted Honey, weighing NET about 280 lbs. which we are offering at 6 cents per lb. f. o. b. Chicago. Do you want a barrel or so of it? If so, address, with the cash,

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

READY TO MAIL

My 40-page Catalog of my Specialties, and **Root's Goods at their prices.** I carry a full line of BEE-KEEPERS' SUPPLIES, and can ship promptly. Catalog Free.

GEO. E. HILTON, Fremont, Mich.

FIRST PRIZE WINNERS

Our 1898 Mammoth Poultry Guide of 100 pages **mailed FREE.** Something entirely new, tells all about poultry, how to be a winner, how to **MAKE BIG MONEY.** Contains beautiful lithograph plate of fowls in their natural colors. Send 15 cts. for postage. **JOHN BAUSCHER, Jr.** Box 94 **FREEPORT, ILL.**

44A26t Please mention the Bee Journal.

QUEENS Untested, after April 1, $1; Tested $1.50; Select Tested, $2. Imported queens, direct from Italy, $5 each. The best of stock, either Golden or Leather Colored. Write for price-list. HUFFINE & DAVIS,
11A4t Ooltewah, Tenn.

Please mention Bee Journal when writing.

Catalog Free **A. I. Root & Co's Goods** for Missouri and other points, to be had at factory prices from **John Nebel & Son, High Hill, Missouri.** 9Atf

Please mention Bee Journal when writing.

Cash PAID FOR Beeswax

For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 26 cents per pound, CASH. No commission. Now if you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

GEO. W. YORK & CO.
118 Michigan st., CHICAGO, ILL.

tell why ...I like to have bee-space between the divider and the super wall," is also garbled. He stops short and doesn't give half the sentence. Why did he not give the whole sentence? He has entirely destroyed the purport of what I said, and then starts out with renewed vigor to kick me for the changed meaning that the garbling has put upon it. Will he please turn to page 51 and compare the original with his garbled statements?

Then he goes on to "suspect" that I have been appropriating some of his valuable thoughts on producing comb honey. No, no; I don't think I ever read one of Mr. Golden's articles to the end, except the one in question, and had my name not been in it, very likely it would have been neglected also. It may be a great lack of appreciation on my part. S. T. PETTIT.

Ontario, Canada.

◆

Bee-Keeping in Virginia—Robbing.

Last year I had some early swarms. I put them out in the country to look out for themselves; so sure was I that they were all right that I sealed them up and left them. Then I went around the country and bought up all the bees I could, along through August and September, and some as late as October, and transferred them to frame hives, taking all of the honey from them and fed them sugar. I also formed, and to save some queens, I put them in hives of 3 frames, with about a pint of bees, and fed them sugar. They came through all right except those in the country that had their own way, and so far I have lost half of them, so I will bet every time on sugar.

I have something I wish to give to the bee-keepers for them to study over, and see what they think of it—something I tried when bees began to rob. I put a skylight in the top of the hive, which doesn't seem to be noticed by the bees of that hive, but the robbers will fly to the skylight and try to get out that way, until they break down, then make themselves at home and remain there. What do you think of it?

I have 18 colonies to start with this spring.

I find I have a hard time in filling orders for my honey, because the people say they know my honey to be honey, and what they buy from the store they don't know about. W. S. SMITH.

Henrico Co., Va., March 16.

◆

A Promising Boy Bee-Keeper.

I received the Bee Journal and I was glad to get it, tho papa reads it first.

Two years ago papa said if I would plow corn good he would get me a swarm of bees, as I had been wanting them for a long time. Well, I did my best and got my bees of Mr. George Reed. They came out in a large swarm on the Fourth of July, and Mr. Reed put them in a hive with a strip of foundation. So we went after them as soon as they had their comb built. Papa said they were patriotic bees, for they came out in the form of a swarm to celebrate.

When winter came we made a big crate with eight inches all around, and filled it up with prairie hay, and the bees were so warm that they reared brood all winter, and came out very strong in the spring.

Mr. Reed came up one day in May and said: "Goodness! that colony is going to swarm yet, for if they don't they can't all get in the hive." And sure enough they did.

I was out playing with my sister when I heard a big roar, and I lookt out and saw the air just full of bees. I shouted to my mother, but she did not believe bees would swarm in May. They went back into the hive, and we got a new one down town. They came again and went back, and papa thinks the queen was too old and weak to fly.

Papa was disgusted with this kind of work, and said he would put a stop to it. He put on a bee-veil and some gloves and went into them. He put four frames with queen-cells on them in the old hive, and the four he took out of the new hive in the

If you want the BEST... **Honey Extractor**

Get Williams' Automatic Reversible, And You Have It. Address,

VAN ALLEN & WILLIAMS,
10Etf **Barnum, Wisconsin.**

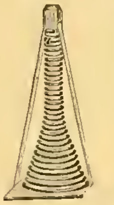
Please mention Bee Journal when writing.

SEND FOR IT. My New Book on **Queen-Rearing** will be ready April 1. "Queen-Rearing" is brought down to 1898. It will tell you how to rear Queens in a brood-chamber while the queen has the freedom of the combs. Price, by mail, 25 cents. Address,

HENRY ALLEY, Wenham, Mass.
14E2t Please mention the Bee Journal.

BEES FOR SALE.

About 90 Colonies of Italians. Any one wanting to start an apiary cannot do better than to call on Dr E. Gallup, Santa Ana, Calif., and examine the Bees before purchasing elsewhere. Double sets of Combs in Langstroth-Simplicity Hives, and warranted a superior lot of Bees for business. Correspodence solicited. **Dr. E. GALLUP,**
SANTA ANA, Orange Co., CAL.



Queen-Clipping Device Free

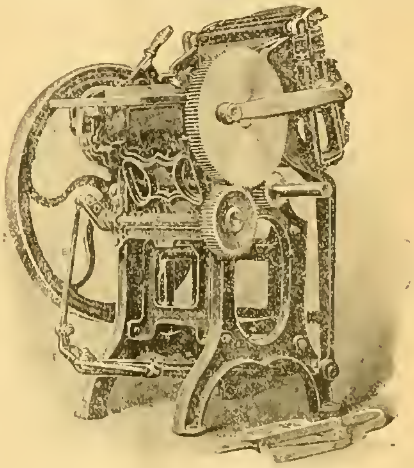
The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 30 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

For Sale Cheap 90 colonies of Bees in lots to suit; in prime condition For particulars address, W. SPENCER, Bunker Hill, Ill. Box 114. 14A4t

PRINTED Envelopes and Letter-Heads.

We have put in a new small Job Printing Press on which to print our own stationery, circulars, etc., and while being able to do this we may as well do some work for our readers, if they will favor us with their orders. If you



want Envelopes or Letter-Heads, send 2-cent stamp for samples and prices. We will make right prices for neat, good work. All orders can be filled by express, at small charge, as the weight would not be great.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

Listen! Take my Advice and Buy
Your Bee-Supplies
of August Weiss!

FINE FOUNDATION AND TONS OF IT. Working Wax into Foundation a Specialty.

I DEFY competition in Foundation

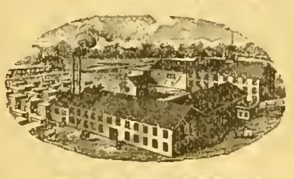
Millions of Sections—Polisht on both Sides!!

SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalogue and be your own judge. Wax wanted at 26 cents cash, or 28 cents in trade, delivered to me.

AUGUST WEISS, Hortonville, Wisconsin.

BRANCH OF... **THE A. I. ROOT COMPANY,**
10 VINE STREET
PHILADELPHIA, PENN.

We keep here everything in the Supply line of latest improvement.
Cleated Separators, Improved Smokers, Weed Foundation, 1898 Goods of all kinds.
Business conducted same as at Medina.
Dealers can order here, as well as consumers, at factory prices.
Save freight and get orders filled at once. Also as fine a strain of 3 and 4-banded Italian Bees as ever gathered honey.
Full 8-frame colonies, $6.00; 3-frame nucleus, $2.75.
14Etf **These Include Guaranteed Italian Queens.**



BEE-SUPPLIES!

We have the best equipt factory in the West. Capacity 1 car load a day; and carry the largest stock and greatest variety of everything needed in the apiary, assuring best goods at the lowest prices, and prompt shipment.

Illustrated Catalog, 72 Pages, Free.

We also manufacture TANKS of either wood or galvanized steel, all sizes, any form, and for all purposes. Price-list Free. Address,
E. KRETCHMER, Red Oak, Iowa.

8E13t Please mention the American Bee Journal when writing.

BEES, HONEY, MONEY

Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

J. P. H. BROWN, Augusta, Ga.

BEES! Florida Italian QUEENS!

Tested Queens, $1.00 each; Untested, 50c.
2-Frame Nucleus of Bees with good Queen $2.
Prompt and satisfactory dealing.
Address, **E. L. CARRINGTON,**
11Atf De Funiak Springs, Fla.

Bee-Hives, Sections, Shipping-Cases—everything used by bee-keepers. Orders filled promptly. Send for catalog. MINNESOTA BEE-KEEPERS' SUPPLY MFG. CO., Nicollet Island, Minneapolis, Minn.

GOLDEN BEAUTIES...

Three-band Italian Queens reared from Root's stock. Golden Queens, from the best selected stock, Untested, 50 cents; Tested, 75 cents. Carniolan Queens at same price.

E. Y. TERRAL & CO.,
Cameron, Texas.

12Atf Mention the American Bee Journal.

Bee-Keepers' Photograph.—We have now on hand a limited number of excellent photographs of prominent bee-keepers—a number of pictures on one card. The likeness of 49 of them are shown on one of the photographs, and 121 on the other. We will send them, postpaid, for 30 cts. a card, mailing from the 121 kind first; then after they are all gone, we will send the 49 kind. So those who order first will get the most "faces" for their money. Send orders to the Bee Journal office.

Ho, for Omaha!

As we have many customers in the Northwest, and believing they will appreciate the low freight rates obtained by purchasing goods from a railroad center nearer to them than we are, getting a direct through-freight rate, thus cutting the freight in half, we have establisht a branch house at 1730 South 13th St., Omaha, Neb., where we will keep a complete line of all Apiarian Supplies, the same as we do at Higginsville, Mo. With the quality of our goods, we believe most bee-keepers in the West are already acquainted, but to those who are not, we will say that our goods are par excellent. Polisht, snowy-white Sections, beautiful straw-colored transparent Foundation, improved Smokers and Honey Extractors, and all other first-clas sgoods, are what we sell. Kind and courteous treatment and honorable dealing our motto. On these bases, we solicit an order, feeling sure that if we sell you one bill of goods you will be our customer in the future.

☞ PROGRESSIVE BEE-KEEPER, 50c per year. "Amateur Bee-Keeper," 25c. Both for 65c., postpaid. Sample copy of the PROGRESSIVE free, and a beautiful Catalog for the asking.

Address, **Leahy Manufacturing Company,** Higginsville, Mo., or 1730 South 13th St., Omaha, Neb.

old hive. A blacker and an angrier colony of bees you never saw. They were so thick on the comb that we could not see it.

After they were divided they swarmed just the same. After they got done swarming I had four fair colonies, and one very weak one. We took off of these small colonies about 75 pounds of fine alfalfa honey. They have wintered fine this far, and I hope to have them build up strong.

LESLIE HAZEN.

Nemaha Co., Kan., March 13.

Bee Keeping in the "Old Dominion."

Bees did tolerably well for me last season. I had 44 colonies, mostly blacks, in the spring, and did not increase much, not more than four or five colonies. I got about 2,000 pounds of comb honey, mostly white clover, as we had a splendid crop of it last season, and a very good flow from buckwheat and fall flowers. I sold most of my honey in the home market for 12½ cents—some at 15 cents—but later on in the season I had to sell at 10 cents, as honey came in from some one else and cut the price.

I have now 43 colonies which are, I think, in very good condition. I do not think bees wintered very well here, as I hear a great deal of complaint about them dying. The winter has been quite open—not much real cold weather. The temperature has not been below zero during the winter—then only for one or two days at that point. I lost three or four colonies by neglecting to feed them more last fall.

Bees were flying for several days last week, and I fed them some while it was warm.

I am preparing to use all tall sections next season—only those of the 4¼x4¼x1⅞ which have starters of foundation in them, and others that the bees made comb in and did not get them filled. I have about 500 of them on hand, and will be ready when the season opens.

I also tried the Pettit system, to get the bees to the outside sections, and it workt like a charm; but I got pretty tired of boring so many holes, as I had no boring machine, and had to do it with a common brace.

I will use fence separators next season, as I tried them sufficiently last season to know that they are the best.

I would like to thank Mr. Wilcox, of Pennsylvania, for his kind answer to my question about the locust bloom. I took notice and found it just as he said.

P. I. HUFFMAN.

Rockbridge Co., Va., Feb. 17.

A Hint on Section-Cleaners.

On page 102 "Wisconsin's" suggestion to Mr. Golden about the felt is business. May I make a suggestion? I would not use any of the glue on any of the sandpaper. It dries hard and stiff, and you injure the elasticity of the cushion. In the machine shops we use the felt on the wheels, and on the *blocks* on the bench, and some have blocks of *cork* for hand work. The felt or cushion under the paper not only does nicer work, but the sandpaper will *wear* much longer than without it. We fasten our paper this way:

A little glue will keep the felt in place. Saw across the face of the wheel about two or more saw-kerfs wide, and ¾ or one inch deep; cut the paper so it will just draw tightly around the wheel, and each end turn sharply down so they will just tuck in the saw-kerf smooth and tight. Drive a strip of tin or wood between the ends of the paper a little below the surface *clear across*. It will not work out, and when the paper is worn out draw the tin wedge, and the paper comes right off readily. You can renew *ad libitum*, with no bother with the glue, and you always have a soft, yielding cushion. Now, this is my plan, and I never use glue to make the paper hard, and two or more thicknesses will do it.

Some might say that in this way there will be a seam where the ends come together. True, but the ends of the folded paper come close together, and in practice you never know the difference. Our factories put the paper on in this way. I always do, and it is perfectly satisfactory, much better than to use glue. You see, two or more thicknesses of sandpaper glued together will make a hard surface, and defeat the object of the felt. A. W. HART.

Stephenson Co., Ill.

Introducing Queens, Etc.

I commenced the spring of 1897 with 15 colonies, increast to 21 by natural swarming, reared several fine Italian queens, and introduced them in the place of hybrids.

Right here I want to give my plan of introducing queens, as I have lost ¾ of the queens that I have introduced in cages.

When I rear a queen in a nucleus and she stands the test, I go to the hive that I want to introduce in, hunt out the queen and kill her, and the next day I take the three frames out of the nucleus and put them in a new hive with my young queen, worker bees and all. I then take two frames out of the hive that has no queen, and put one on each side of the three frames that has the queen, and leave them till the next morning. I then add two more frames, and the evening of the same day I finish filling the hive. I then have three frames of brood, honey and old bees left to go back to the nucleus to rear another queen.

I have introduced several queens with the above plan, and have not lost a single one while following it, and I think if one would take two or three frames out of a queenless hive and put into a new hive, and then introduce the queen in the cage to a small amount, there wouldn't be so much danger of getting her killed. Then after a few bees get used to her, follow the plan as given above.

I think my bees are all in fine condition. We have had several warm days, and I noticed to-day they were bringing in the bee-bread by the wholesale. W. W. BUCY.

Calloway Co., Ky., Feb. 10.

FREE FOR A MONTH.

If you are interested in sheep in any way you cannot afford to be without the best and only weekly sheep paper published in the United States.

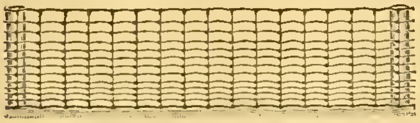
WOOL MARKETS AND SHEEP ☘ ☘ ☘

has a hobby which is the sheep breeder and his industry, first foremost and all the time. Are you interested? Write to-day

Wool Markets & Sheep, - - Chicago.

EGGS From pure bred, barred P. Rocks Large and fine plumaged. $1.00 per 15. Also Light Brahmas and Black Langshans, same price. B. P. Rock Cockerels, $1.25.

MRS. L. C. AXTELL,
ROSEVILLE, ILL.



Comes and Goes,

but still is a "stayer." Come summer, come winter, The Page abides unchanged. We've told you over and again it's the coil that does it. That coil is patented by the

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Convention Notices.

Connecticut.—The seventh annual meeting of the Connecticut Bee-Keepers' Association will be held at the Capitol, at Hartford, Wednesday, May 4, 1898—10:30 a.m. Every bee-keeper in the State should take an active interest in this meeting. All are cordially invited. MRS. W. E. RILEY, Sec., Waterbury, Conn.

Illinois—The spring meeting of the Northern Illinois Bee-Keepers' Association will be held at the residence of Alexander Peterson, 5 miles northwest of Rockford, Tuesday, May 17, 1898. All are cordially invited.
B. KENNEDY, Sec., New Milford, Ill.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, April 13.—Best grade of white, 10 to 11c; fair grade, 8 to 9c.; dark, 7 to 8c. Extracted, white, 5 to 6c.; amber, 4 to 5c. Beeswax, 27c.

The active season for sale of comb honey is over until the marketing begins of the yield to be obtained in 1898.
R. A. BURNETT & CO.

Boston, April 14.—Fancy No. 1, in cartons, 13c.; in glass-front cases, 12c.; A No. 1, 11c.; No. 1, 9 to 10c.; No. 2, 9c. Extracted, white 6 to 7c.; light amber, 5 to 6c. Beeswax is scarce at 26c.

Our market on comb and extracted honey has kept active at old prices, and as a result the stock is well cleaned up. There is very little call for anything but white in this market. BLAKE, SCOTT & LEE.

Cleveland, April 14.—Fancy white, 12 to 12½c.; No. 1, 11c.; No. 1 amber, 9 to 10c.; buckwheat, 8c. Extracted, white, 6c.; amber, 4 to 5c. A. B. WILLIAMS & CO.

San Francisco, April 6.—White comb, 8½ to 10c; amber, 6½ to 7½c. Extracted, white, 5½c.; light amber, 4¾ to 5¼c. Beeswax, 24 to 27c

A ship sailing this week for Hamburg took 316 cases. Sellers are not nearly so numerous as early in the season, and are inclined to be quite exacting at present in the matter of prices. Market is strong for comb and extracted, with supplies of latter light and stocks of comb showing steady decrease. The firmness is based mainly on the poor prospects for coming crop.

Detroit, March 22.—Fancy white is lower and now quoted at 11c. No. 1, 9@10c; fancy dark, 7@8c; No. 1 dark, 6@7c. Extracted, white, 5@6c; dark, 4@5c. Beeswax in good demand at 26@27c.

There is considerable dark and undesirable honey on commission now, and some of it will be carried over to another season.
M. H. HUNT.

Kansas City, April 9.—Fancy white, 1-lbs., 9@10c; No. 1, white, 9c; amber, 8c. Extracted, white, 5@5½c; amber, 4½@5c; dark, 4c. Beeswax, 20@22c.

Demand for both comb and extracted honey is fair. C. C. CLEMONS & CO.

Minneapolis, Mar 18.—Honey much more encouraging. Fancy white clover comb is selling here now at 10½@11½c. Not advisable to ship darker than amber. Extracted fancy white clover, 5½@6c; amber, 5c; dark, 4@4½c.

Outlook for honey much more encouraging.
S. H. HALL & CO.

Cincinnati, Mar. 21.—Demand fair for extracted, with insufficient supplies. Prices range from 4@6c, according to quality. Demand for comb is slow at 10@13c for best white. Beeswax in good demand at 20@25c for good to choice yellow.
CHAS. F. MUTH & SON.

Indianapolis, March 24.—Fancy white, 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand. WALTER S. POUDER.

Milwaukee, March 8.—Fancy, 11 to 12c.; A No. 1, 10 to 11c.; No. 1, 10 to 10½c.; No. 2, 9 to 10c.; amber and dark, 7 to 8c. Extracted, in barrels, kegs and cans, white, 5 to 6c.; dark, 4½ to 5c. Beeswax, 25 to 27c.

We are able to report an improved demand for fancy honey during the past few days, while the medium grades have also sold better, yet the surest sale is on the BEST. The supply continues equal to the demand, but the fancy grades are not in as good supply as the low and medium, which goes to prove that the fancy sells best—and the values better
A. V. BISHOP & CO.

Buffalo, March 11.—There is a good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

St. Louis, Feb. 9.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.
WESTCOTT COM. CO.

Just the Machine every bee-keeper ought to have, the Improved McCartney Foundation Fastner and Section Press combined.

THE BEST machine ever invented for pressing the sections together and fastening in starters. It cuts the foundation any desired length, and presses it on, all at one operation. If you want one this season order at once. For further information, address G. R. McCARTNEY, 1215 S. West St., ROCKFORD, ILL.

Please mention Bee Journal when writing.

TAKE YOUR CHOICE!

A Merry-Go-Round or Bees For Sale...

Colony Bees in 8-frame Langstroth Hives, $4. A good second-hand Wheel for a little over half cost. Have some good Fair privileges can go with it. A good business for the right party. Investigate. Address,

D. G. WEBSTER, Capron, Ill.

16A1t Please mention the Bee Journal.

Italian Bees For Sale!!

We have arranged with a large bee-keeper in Lee County, Ill., (about 100 miles west of Chicago), to fill our orders for Italian Bees at the following prices there, which include a good Queen with each colony:

8 L. frames of bees in light shipping-case, $3.75
5 at $3.50 each.
8 L. frames of bees in dovetailed hive, $4.25.
5 at $4.00 each.

Prompt shipment after May 1, and safe arrival and satisfaction guaranteed. Address

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

Williams' Self Hiver and Trap.—Something practical and economical. A combination Queen and Drone-Trap, used also as a self-hiver of swarms. Illustrated and described on page 131. Address for circular, GEO. W. WILLIAMS, Humansville, Polk Co. Mo.

16A2t Please mention the Bee Journal.

DO YOU know the Constitution of the United States?

Every citizen of the republic should be familiar with the Constitution and all the charters of our national policy. You can find them collected in

Our National Charters,

a pamphlet giving the Constitution and Amendments, The Declaration of Independence, the Articles of Confederation, Washington's Farewell Address, the Dictatorship Conferred on Washington, the Ordinance of 1787, the Monroe Doctrine, and the Emancipation Proclamation. As a matter of patriotic pride, if for no other reason, every American should be familiar with these documents. Price 50 cents.

Shall I Study Law?

BY ONE WHO HAS TRIED.

This book was written for men who are thinking of taking up the law as a special study, either for practice, for general culture, or for business purposes, and discusses the matter fully, giving reasons for and against it, together with much practical instruction, enabling men to know what to do in answer to this question.

Paper bound, 69 pages. Price 50c.

Sent on Receipt of Price.

PREMIUM OFFER.

For sending us One New Subscriber to the Bee Journal for 1 year (at $1.00) we will mail as a Premium either of the above books.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

Talk about ....Comb Foundation

WE can now furnish the very best that can be made from pure wax. **Our New Process of Milling** enables us to surpass the previous efforts of ourselves and others in the manufacture of Comb Foundation.

It is always Pure and Sweet.
It is the kind that does not sag.
It is the kind you want.

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38th Year. CHICAGO, ILL., APRIL 28, 1898. No. 17.

CONTRIBUTED ARTICLES

Bee-Culture in the State of California.

BY PROF. A. J. COOK.

Despite the numerous "off" seasons, too frequent to please bee-keepers, California takes first rank as a honey-producing State. Her product in favorable seasons, of from 100 to 200 pounds of honey per colony, and that in apiaries with from 200 to 600 colonies, is surely a record that few localities in any section of the world can equal. Yet if we can judge the future by the past, not more than one-third of the seasons can be counted on to give a full crop. Yet, as the bee-keeper can know far in advance, at the very dawn of the season, that the failure is to come, he is better off, as "fore-warned is fore-armed," in that he can seek other employment, and can avoid expense which would otherwise be incurred, and would be put by as so much useless capital.

As I have before hinted, the cause of the great honey-flow here in good seasons is the long blooming period of the most valuable honey-plants. The sages—source of our white honey—are in bloom for weeks, and the wild buckwheat, the chief source of our amber honey, hangs out its profusion of flowers for months.

The best honey section is undoubtedly Southern California, with its seven counties, of Santa Barbara, Ventura, Los Angeles, San Bernardino, Riverside, Orange and San Diego. The southern central counties—Fresno, Kings, Kern and Tulare—are favored in that they are in a great alfalfa region, which is irrigated and so independent of drouth. These regions have produced large crops, even in the very dry seasons, like that of 1894. East of this, over the mountains, is Inyo county, which, like San Luis Obispo on the west, afford some excellent bee-ranges.

Northern California is not so favorable for honey-production, altho they have more rain. They have not the sages, or other honey-plants, to take their place. There are large alfalfa areas, and possibly much more honey might be produced in the great northern sections of our State.

In the great California honey-region—I refer to Southern California—Santa Barbara county is the least important. The bush and watered canyons with rich acres of sage are not common, and there are not many bee-keepers in that section.

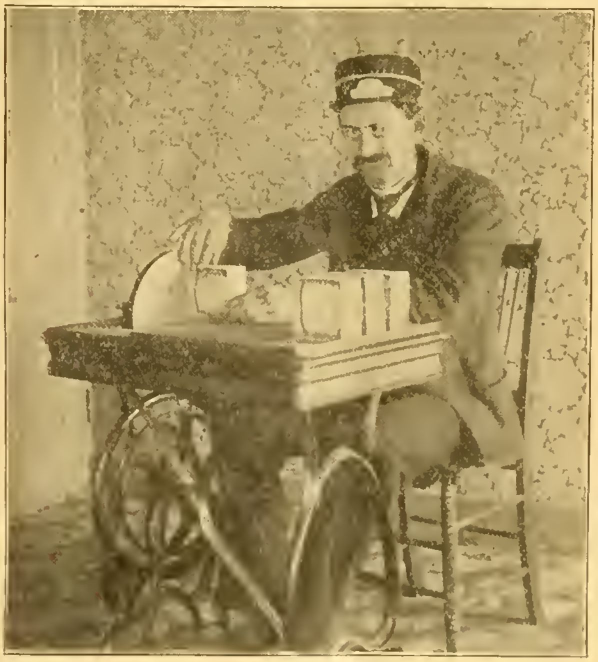
Ventura county is the great bean-region, and also possesses some canyons with a fine growth of white or ball sage. The famous Sespe region is in Ventura county. Some of our most successful bee-keepers, like McIntyre, Richardson, Touchton and Mendleson, live in this county. The records from some of these apiaries have been startling. With abundant rain the honey-product from sections in Ventura is enormous. In dry seasons the bean blossoms add materially to the honey-yield if bee-keepers will avail themselves of this opportunity.

Los Angeles county ranks among the first, tho the range of the honey-producing flora is not so extensive as of some of the other counties. From the Newhall Tunnel north, and skirting the famous Antelope valley, is one of the best bee-regions of the world. In the seasons of copious rains, the honey-product in these ranges is exceeding large. There are also fine producing tracts all along to the south of the mountains from Glendale and La Canada to the eastern boundary of the county. Apiaries situated near the canyons have the advantage of the early bloom of the valley, and the later nectar-flow of the canyons.

The two counties east of Los Angeles county—San Bernardino and Riverside—are both justly famous for their bee-keeping ranges. There are no better honey-regions than are found in some of the canyons of these great counties. Even in this dry season, the bee-keepers confidently expect some honey, in some of the sections of this favored section. The same may be said of limited areas of Los Angeles county.

Orange county, to the south of Los Angeles, tho not large, has some fine apiaries, and the bee-keepers of this county expect a small crop even in this season of excessive drouth.

The San Bernardino apiarian tracts are like the great county—of exceeding extent. About Fallbrook, Escondido, and farther south, are canyons rich with honeyed bloom. Many carloads of the finest honey were produced last year. This county has one disadvantage, in that the rainfall is less than farther north, tho the honey-product of the county has not been behind other regions, if we take the seasons together.



A Perpendicular-Disk Section-Cleaner.—See page 258.

The fact that honey-plants, like white sage, may bloom in profusion, and yet yield no honey, shows that plants need water to develop at their best, and should suggest to orchardists that they irrigate liberally in the winter, especially if the summer supply of water is likely to run short.

Los Angeles Co., Calif., March 25.

⁂

More Suggestions on Rendering Beeswax.

BY C. P. DADANT.

I have received the following questions to be answered in the American Bee Journal:

> Mr. Dadant:—Tho I was much interested in your "Suggestions on Rendering Beeswax," on page 194. there are some things I do not fully understand. In previous articles you have recommended the sun extractor; in this you urge heating the wax slowly with water, but boil a little you say.
>
> 1. What I want to know is, whether this is the final process following the extractor.
>
> 2. Or do you boil it *first*, then place it in the sun extractor?
>
> Until last season I was troubled with that "greenish, grayish, grainy residue" you speak of. I then made a sun extractor and put everything into it the first thing—old comb, scrapings from the bottoms of supers, etc. The *final* process being to put the wax from the extractor into a flour-sack—thin, slazy cloth—place the sack in a tin pail, one-third full of water, set the pail into an iron kettle of water, and the kettle on the stove. After the wax was thoroughly melted (it did not *boil*), the sack was raised from the pail, the wax squeezed out, and the pail set in a *warm* place to cool, to prevent cracking. With the exception of a thin, grayish-white substance on the bottom of the cakes, the wax seemed to be of excellent quality.
>
> 3. Do you think my process correct? A. F. Foote.

Answer.—Your process is all right, and it would be difficult to recommend a better one. When I recommend the rendering of beeswax over water, it is not to the exclusion of the sun extractor, but for the benefit of those who have no sun extractors, or wish to render their beeswax, especially cappings, between the mouths of August and May, at a time when the sun extractor has no power. There are really only four mouths of usefulness in a sun wax extractor, and when a bee-keeper has a hundred dollars' worth of beeswax tied up he does not usually wish to wait till the sun gets high enough in the sky, especially if there is any process by which he can render his beeswax and have it clean and good without loss.

The sun extractor is available during the busy months of the apiary when you are likely at any time to have a few small pieces of comb, new or old, or a few scraps that would either be lost or drag about, or be eaten by the moth. With the sun extractor, usually in close reach of the apiary, it takes but a minute to put those scraps where they will at once, mechanically, be rendered into very good beeswax by the rays of the sun. If the sun extractor is kept, as is the custom with the careful bee-keeper, with neatness, the beeswax that will come from it will need no rendering unless residues or dark combs have been melted. Care must be taken that such residues as have been rendered up with acid be kept separate, as these are sure to have some effect upon the metal, and damage the color of the original beeswax.

Old combs usually are not worth putting into a sun extractor. They are so thick and loaded with foreign matter that it absorbs all the wax that would otherwise run out. The very best process to be followed with these was given years ago by my father in the American Bee Journal; these combs must be crusht as near to a pulp as possible, then put into water to soak for a week or so, loaded down so as to be under water, and then melted with plenty of clean water. When old combs are melted without having been previously crusht, it usually happens that some of the melting wax runs into the empty cells which still remain in shape, being held to this shape by the cast-skins and cocoons of the bee-chrysalis, and it is next to impossible to remove any of it. The soaking for a few days ahead thoroughly saturates the cocoons and cast-skins, as well as other residue of whatever nature, except the propolis, and the beeswax becomes much more easily liberated if properly melted.

The cappings, which are gathered together generally about October, are most generally rendered during the winter, and when the matter is attended to intelligently, the beeswax is as good as that from the sun extractor. The main advantages of the sun extractor are its availableness at all times during the summer, as above mentioned, and the slight bleaching of the beeswax which remains a few days in it.

In this connection it is well to mention that it is not advisable to leave the beeswax too long in the sun extractor, unless the extractor is so made that the liquid wax runs into a pan sheltered from the light. Beeswax that has been thoroughly bleacht loses its nice bee-smell, and takes up an odor resembling that of the old-time wax-candles. This is certainly not desirable. But the best service of the wax extractor is to prevent the water damaging of beeswax by inexperienced bee-keepers, or to return such damaged beeswax to its proper condition.

In any beeswax that is rendered by water, a small amount, more or less, of this water-damaged beeswax can be found. But if this is allowed to separate by a slow cooling process, it will be found that most of the impurities are dragged to the bottom with this beeswax. What must be avoided is the damaging of the entire mass by careless heating, and as sudden cooling of the mass. It is a very peculiar fact that water may be held in suspense in a large amount, and yet not perceptible to the touch. We have seen beeswax that was thus damaged, and seemingly dry, lose 20 per cent. of its weight by sun-rendering, which was evidently due to the evaporation of the water.

Hancock Co., Ill.

⁂

A Perpendicular-Disk Section-Cleaner.

BY FRANK J. CLARK.

I send you herewith a photograph of my section-cleaner. I have read several descriptions of section-cleaners, but I fail to see any that I should be willing to exchange mine for. The more I read about other kinds, the more I value my own, and I believe that on some points it is superior to all others.

I probably should not have thought anything more about section-cleaners if it had not been spoken of so many times in the bee-papers. It will readily be seen how mine is constructed, by the photograph. Sections to be cleaned on all sides have only to be turned down on their side to clean their top, and down on their opposite side to clean the bottom, where with all other machines you would have to turn the box bottomside up to clean the top, which is always the worst side to be cleaned, and in some cases would cause them to leak, which would be avoided with my cleaner.

As for cleaning the edges, you can clean all the edges on one side with one movement against the disk.

The disk is covered with sandpaper, No. 2½ or 3.

I cannot say whether this machine will clean sections any better than any other, as I believe they all clean them well; but I do believe this cleaner will clean sections faster, and with no leakage or breakage.

I have written to patent attorneys in regard to having it patented, and am about entering into an agreement with a firm of bee-supply manufacturers to make and place them on the market.

Cayuga Co., N. Y.

⁂

The Utah Law on Foul Brood or Bee-Diseases.

BY E. S. LOVESY.

I send a copy of Utah's new foul brood law. I have received a number of letters of inquiry in regard to this law, and have sent out some type-written copies, but in order to accommodate all interested I send it for publication in the American Bee Journal. While I am aware that no act of this nature is, or ever has been, perfect, and this law has no exception, I think that the copy presented to our legislature by our foul brood committee was an improvement on the one past. Still, I believe that if our bee-keepers will read and note this law carefully, they will find it one of the best, if not the very best, on the subject in the United States.

A great deal has been written, and much praise has been bestowed, on the Wisconsin law, some writers saying that it is the best law in force on the subject. While my object is not to decry the merits of any law, after a careful study of the Wisconsin law I have to admit that as far as our State is concerned it would be of very little benefit to us, and I fail to see where it can be of material benefit to any populous bee-keeping community, as it only provides for one inspector in the whole State, while we have single counties that no one inspector could cover. It will be seen that whether there are few or many bee-keepers or colonies of bees in any county or district, or in the entire State, this Utah law is so worded that it can be made to reach every colony of bees and every bee-keeper in the State, if necessary. It provides that the inspector shall visit all colonies of bees at least once a year, and as many more times as may be necessary. It is short and to the point, and it gives our bee-keepers ample authority to put it into active force. Then if bee-keepers will take an active interest I see no reason why it should not be a success.

Our foul brood committee have been energetic in this matter, and they have workt faithfully for years in importuning our legislature to improve our foul brood law, and we thank and congratulate them on the success thus far obtained through their efforts. Salt Lake Co., Utah.

[The following is a copy of the law referred to by Mr. Lovesy :—EDITOR.]

LAW OF UTAH FOR THE PROTECTION AND ENCOURAGEMENT OF THE BEE-INDUSTRY.

1. The board of county commissioners of the several counties shall, when petitioned by a majority of the bee-keepers thereof, appoint one or more qualified persons inspectors of bees for their respective counties.

2. Such inspectors shall hold their office for two years, and until their successors are appointed and qualified. They shall qualify by taking and subscribing their official oath, and by giving bonds to be approved by their respective boards of county commissioners, which oath and bonds shall be filed with the county clerk.

3. Inspectors shall be paid out of the county treasury for services actually rendered at such rate per day as the board of county commissioners may fix. The assessor of each county is hereby required to assess each colony of bees in this county in the same manner as other assessments are made. All taxes shall be assest and collected thereon in the manner provided by law for the collection and payment of county taxes.

4. All hives of bees in each county shall be carefully inspected at least once each year by a county or district inspector, where such inspector has been appointed, and at any time upon complaint that disease exists among bees of any person, the inspector to whom complaint is made shall immediately inspect the bees said to be infected. The inspector shall have authority to take charge and control of diseased bees and their hives, and the tools and implements used in connection therewith for treatment; or destroy such bees, brood or hives and their contents or implements as may be infected; provided that if any owner questions a decision of the inspector he may appeal to three arbitrators selected from among the bee-keepers of the county, one of whom shall be chosen by the owner, the second by the inspector, and the third by the two so chosen, whose decision, concurred in by at least two of their number, shall be conclusive as to the condition of the bees at the time of such examination.

5. Any person who shall hinder or obstruct, or attempt to hinder or obstruct, a duly appointed inspector from the performance of any duty required by this title shall, on conviction thereof before a justice of peace having jurisdiction, be deemed guilty of a misdemeanor, and shall be fined for the first offence not less than five nor more than twenty-five dollars, and for any additional offences, any sum not exceeding fifty dollars.

Approved, March 11, 1897. To take effect Jan. 1, 1898.

⁂

How to Make Hives and Winter-Cases.

BY EDWIN BEVINS.

I have neither the ability, the inclination, nor the desire to invade Dr. Miller's province, but at the risk of being deemed meddlesome by him, and of being shot by the "Brothers" who dwell in central Minnesota (see page 215), I am going to tell how to make a bee-hive.

If it is the intention to make hives of the capacity of the 8-frame dovetailed hive, you should get some thoroughly dry pine-boards planed on one or both sides, 9½ inches in width. I generally get boards 10 inches wide, and plane down to the right width after they have been sawed into pieces of the right lengths. The right lengths are 20 inches for the sides, and 12⅛ inches for the ends of the hives.

You are probably a little curious to know how I rabbet these hive-ends without the use of any machinery or power except a common hand-saw and my good right arm, aided a little now and then by the left one. Well, I lay the hive-ends on a work-bench and measure from the upper edge down 3/16 of an inch, and make a mark with a lead-pencil. Then with a jack-knife held perpendicularly I cut along the mark as deep as I can. Then turning the knife towards the top of the board I cut out a sliver of wood so as to make a groove to start the saw in. Then I put the board in a vise, measure 7/16 of an inch from its inner edge, make another mark, and cut another groove as before. With the saw in good order one can quickly saw to the proper depth. Then lay the board on the bench, fasten at both ends, and you can quickly complete the job.

Having made the rabbets for 150 hives in this way, I think I may be believed when I say that the work is not so formidable as it may seem before trial. Some of my hives are two-story hives, and besides rabbeting the hives I have made and rabbeted the supers for nearly all of them.

Having the rabbets sawed out you may consider the work of making a hive-body as almost done. The nailing should be started on a perfectly flat surface. It is best to have a sort of platform a little larger than the hive, with a cleat strongly nailed at one edge for a bumper to nail against, and another cleat nailed on another edge at right angles to the first one. The nailing can be finisht by turning the hive on its sides, and the hive-corners can be kept at right angles by using a square.

The nails should be cut nails, made so as not to be wedge-shaped crosswise of the grain of the wood. When the hive is nailed, nail in the tin rabbets. You do not have to gouge out any hand-holes to lift the hives by. Make cleats 6, 8 or 10 inches long, plane them so that their upper edges shall slant outward and downward; whittle the ends so that they shall be rounding, and nail one on each side of the hive near the top. My bees have never kickt on the use of these cleats, and I like them better than the holes.

For covers and bottom-boards I get lumber a strong 14 inches in width, using the best of it for covers, and the poorer parts, if not too poor, for bottoms. Sometimes I make the bottoms of two pieces. All of the covers and bottoms are sawed exactly two feet long, and have cleats two inches square nailed under each end. The cleat at the back end of the bottom-board is nailed about ½-inch from the end for convenience in lifting, but the cleat in front is nailed just even with the end for the convenience of the bees. The cleats for the cover should be nailed so as to give a play of about ⅛-inch.

For all 8 and 10 frame hives of standard depth I use flat covers, and have never had but one to twist. This twist can be taken out by the use of the Dibbern hive-hook, and when once taken out it will stay out. Lath can generally be found of the right thickness to make the ⅜-inch strips for the bottom-boards. If too thick it is not much work to reduce them with a plane.

A word about painting hives: It may be that Mr. Doolittle's idea that an unpainted hive is just as good, if not a little better, than a painted one, is correct, but for myself I prefer to paint. No more expensive paints for me, however, except for covers. For these I use the best of white paint. For the other parts of the hive a paint made of sweet skimmed milk and hydraulic cement looks well, costs nothing, is quite durable, is odorless, and dries quickly so that it can be renewed with the bees in the hive without annoyance to them.

And now having incurred the liability of being run out of the country with some guns in the hands of enraged "Brothers," I will proceed to exasperate them some more by telling them how I make winter-cases for my hives.

For an 8-frame hive, dovetailed size, with super on for chaff cushion, I get two pieces of 2x4 stuff 19 inches long, and two pieces 2x2 the same length. These are posts to which the sides of the case are nailed. The boards for the sides are sawed 30 inches long. The 2x4 pieces come against the sides of the hive just even with its front. The 2x2 pieces serve as cleats to keep the end of the case in the rear of the hive from being prest outward by the packing. The boards for the end of the case are sawed 22 inches long, and held together by cleats so as to slip down between the sides of the case like the end-board of a wagon.

I prefer to have a bottom-board for the winter-case, and make it two feet wide and three feet long. This bottom is placed under the hive, and then the sides of the case are set up on top of it on each side of the hive, and kept from falling by a piece of wire bent around nails partly driven in the center of the posts. Then the end-piece of the case back of the hive is put in place and another piece of wire is bent around nails partly driven in the center of the two posts at the rear. These two pieces of wire are all the support needed by the case. The case can be quickly and noiselessly set up and as quickly and noiselessly taken down.

You will see that there are four inches of space on each side of the hive for packing, and a little more than that at the rear. The packing is straw and chaff from the straw-pile. This measure of protection may not be sufficient for the latitude of Minnesota, but it is just right here in southern Iowa. I have never had the entrance to one of my hives thus protected clogged with dead bees, and spring dwindling is unknown. Cellar wintering may be better for Minnesota, or, perhaps the winter-case may be modified to answer a good purpose there.

My cover for the winter-case is 3 feet long and 2½ wide. The boards are held together by a 2x4 cleat set up edgewise and nailed near one end, and a cleat about one inch thick nailed near the other end. The 2x4 cleat gives the cover the proper slant.

All the parts of this winter-case can be used for shade-boards in summer, or if piled up they need no great amount of space. They are made of lumber rough and cheap, but I think all will agree that they are strong and durable.

What about frames, did you say? For all hives taking the standard frames the V-edged Hoffman is good enough for me, and John Doe and Richard Roe. It is a little trouble sometimes to loosen up the first one so as to remove it, but when this is done it is an easy matter to do anything you want to do with the rest of them. But please don't get any of the bobtailed things that call for end-spacers. They get diagonally across the hive and slip down against the bottom-board so easily that one is made to feel sometimes as if he would like to shoot the man who invented them.

And, now, my dear "Brothers," let me entreat you to make some bee-hives. You will be very awkward at first, and make some mistakes, but after awhile you will acquire a degree of skill and carefulness that will enable you to do your work with a reasonable degree of accuracy and neatness, and while you are doing the work the whole subject of hives and their management will be revolving in your minds, and your knowledge of, and your interest in, the subject will grow and deepen to such a degree that you will hardly be persuaded to take a ready-made hive as a gift. Decatur Co., Iowa.

⁂

Managing Bees—Report for 1897.

BY D. B. MAHAN.

I remember reading, when a boy in school, that all Gall is devided *in partes tres*. I think, however, in some individuals, instead of being divided it has been greatly multiplied, and in attempting to write an article for the American Bee Journal I somehow have a suspicion that I may be one of these same individuals. Nevertheless, encouraged by the thought that many valuable lessons have been learnt from the ignorant as well as from the intelligent, I shall attempt to give a few thoughts on my method (?) of handling bees.

As to hives, I have found no better than the dovetailed, with Hoffman brood-frames, and supers filled with plain sections and cleated separators.

Altho I keep my bees adjacent to an apple-orchard, I do not utilize the trees for protection from the sun, but instead use for that purpose a comb roof 2½ by 3 feet. To make this, I use three pieces 2 inches square and nearly 3 feet long; two short pieces 1x2 inches, and barrel-staves cut 20 inches long. I use these because they are so much more substantial than shingles. When completed, one of the 3-foot pieces is under the comb, the staves on each side of the roof being nailed to it. Each of the other two 3-foot pieces to which the roof is nailed is 16 inches from the comb. To the ends of these a 1x2 inch piece is nailed to prevent the roof from spreading. The staves are laid with the concave side down, and lapt so that the roof forms protection from rain as well as from the heat of the sun.

I set the hives about 4 inches from the ground, and 7 feet apart each way, and cover each with the roof above described. In September or October I set each hive in a store-box sufficiently large to leave a space at least 2 inches on each side and end of the hive, and 6 inches on the top. I remove the hive-cover and instead put one or two thicknesses of some kind of cloth, and on top of that a chaff cushion. The remaining space is filled with chaff or shavings, and the box-cover and roof (both of which are water tight) are then put on. The box is so arranged that the chaff or shavings in the front part of the hive come within 4 inches of the bottom. Underneath the box-cover a small space should be left for ventilation.

With this outfit I have been reasonably successful. In the spring of 1897 I had nine colonies. During the summer I increast to 26, and secured 800 pounds of nice comb honey, which I sold at an average of 14 cents per pound. Taking into consideration the fact that the bees were not fed a pound of anything during the season, I consider this quite a satisfactory yield. Two colonies (prime swarms) gave me 140 pounds each of surplus honey. The question now revolving in my mind is: Had I been thoroughly posted in bee-culture, and had I given my bees the best of attention, would it have been possible to take from each of the 26 colonies as much as from each of these two, and thus have secured instead of 800 pounds 3,640 pounds? If I had known as much about bees a year ago even, as I do now, I doubtless could have increast the product very materially.

I am reading the American Bee Journal with increast interest. Champaign Co., Ohio.

CONVENTION PROCEEDINGS

Proceedings of the Colorado State Convention.

REPORTED BY F. L. THOMPSON.

[Continued from page 247.]

Mr. G. G. Liebhardt, of The G. G. Liebhardt Commission Co., then read the following paper:

Packing, Shipping, and Marketing Honey.

The matter of packing should receive attention as to style and uniformity of package. It is a subject in itself. The matter of shipping is immaterial at present, being embodied in the first and second subjects. The matter of marketing is at present the most important requiring your consideration.

Without proper compensation for your labor you cannot continue the business. Competition in all lines and branches of industry is daily becoming sharper, and those not watchful of changed conditions and tendency of the times will sooner or later find themselves battling against the stream and fate. The most casual observer must notice that the tendency of the times is for concentration and centralization. Trusts are being formed for the purpose of making a profit—an increast profit—or saving those interested from ruin. Trust goods are the only ones having a staple market price. Even laboring-men have trusts in the form of unions for protection, in various forms, of their wages. We realized ten years ago that associations formed in fruit districts were not only a benefit to the individuals interested, but a decided material advantage to the community where located. We have been instrumental in various parts of the country in assisting in the formation and successful operation of such associations. By forming an association you at once obliterate competition amongst yourselves. As it is now, you have too many competitors and not enough purchasers. Reverse the situation and you eliminate your element of weakness. By unity of action you can stop adulteration and increase the home consumption a hundred-fold.

The production of honey in the United States in 1881 was estimated at 200,000,000 pounds. It is probably not much more than that to-day. Just think of it, not three pounds of one of the most wholesome foods known to mankind is consumed annually by each of the inhabitants of this country! I know of no industry to-day that affords such favorable opportunity for expansion. It requires only protecting and educating the public—protecting them against adulteration, and educating them as to the wholesomeness and use of honey.

You should not delay in forming a Honey-Producers' Association at once, and the beneficial result will be apparent by the large and enthusiastic assembly you will find at your next annual meeting.

THE G. G. LIEBHARDT COMMISSION CO.

H. Rauchfuss—I have talkt on this subject for years, and can only repeat that we ought to have co-operation. I would like to hear from others.

Mr. Dudley (Secretary of the Utah Bee-Keepers' Association)—What facilities has your firm for handling carload lots out of the State?

Mr. Liebhardt—Ourselves, and other firms, too, have facilities for handling all honey without difficulty. Other matters require attention. There is not one-tenth as much honey consumed as there ought to be.

Mr. Rhodes—I am in favor of co-operation. We ought to have an organization to handle all the honey we produce. This State ought to consume all we have. Any surplus can be handled better by co-operation than in any other way. The trade should be placed on a good business basis.

Mr. Adams—I have listened to Mr. Rauchfuss a good deal. There are difficulties. We do not produce what we should consume. Many who own 3 to 10 colonies produce a little, sometimes pretty nice sections, and don't care what they get for it.

Mr. Lyon—This is a most vital question. There was no need of selling our honey as we did last year. A man from the East offered me 20 cents a case more than we were getting. I did not sell to him, but went East with my honey. The prices here knockt me out, 2½ to 3 cents a pound. If it was not for that cheap honey here I could have done as well as in former years. I am selling ten times as much as others in my neighborhood, and sell for more (10 cents straight), simply because my customers cannot have it for less.

Mr. Liebhardt—Until a year ago the Rocky Ford melon-growers realized nothing. Many crates were sold here for less than the cost of the crate. They finally formed an association, and made a contract with an Eastern firm for 25 carloads. The firm used 118 carloads at 75 cents a crate. Last year they took 300 carloads at 95 cents a crate. Fifty crates were shipt to London. This year the same firm will probably have 600 carloads. It does not make so much difference what the price is, as that the parties cannot buy for less.

Mr. Varian—I'm an Irishman. I came here 20 years ago, and was recently on a visit home. Hardly any product could be more easily shipt to the other side of the Atlantic than honey. They could produce much there, but they do not do so. They get from a shilling to one and sixpence a pound, and extracted is higher than comb. There is a quantity of California and West Indian honey in London, but not in Dublin or other cities. I am sure there is quite a chance for the sale of our honey in England and Ireland, but it will need concentration and proper parties on the other side. It is just the same with honey as with butter and cheese—it is a matter of custom. England and Wales consume quantities of cheese; in Ireland none eat it at all but the wealthy.

The Secretary then read a letter from Mrs. A. J. Barber, of Montezuma Co., which follows:

Marketing Honey.

My first extracted honey was put into the home market in 1890. At that time this place had only one store and a meat market. The store-keeper did not want to bother with honey, so the meat man agreed to see what he could do. I did not know anything about the business, and neither did he, but we tried all I had (500 pounds) in half-pint jelly-glasses. It went off nicely until it began to granulate, when our customers thought they knew that that honey had been adulturated. We had a lot of it to melt over, and then people seemed suspicious of it. We finally got rid of it, however, at 15 cents a glass, but I was not satisfied to sell something that people suspected, so I made up my mind to produce comb honey.

Before the next season came on, however, I took out some sections that I had put away in a box, and found them granulated hard. I could see no way out of the difficulty, but produced both kinds again. This time I traded nearly the entire crop of 1,500 pounds to the neighbors for anything that I could use. The meat man sold 300 or 400 pounds in pails; but the complaints were so many that if I had not been in love with the bee-business I should have given it up. I had that year about 200 unfinisht sections. These I concluded to devote to the education of my customers, so after they had granulated they were given away to them as a specimen of genuine alfalfa honey.

In 1893 I came to this conclusion: "Honey *will* granulate, and I can't help it. Now the sooner people know all about it the better. I am well known here, and if I should stand back of every pound of honey I sell, perhaps it will make a difference." I had a lot of labels printed, stating that all pure honey will granulate, and telling how to liquefy it, and guaranteeing the purity of all honey under that label, giving name and address. These labels were put on the tin pails, and the campaign began.

Owing to foul brood, I had only 1,000 pounds of honey that year, but it all went for cash—no trading this time. I invited all the neighbors to come and see the extractor, and how it workt; also gave away lots of comb honey the next spring, after it granulated.

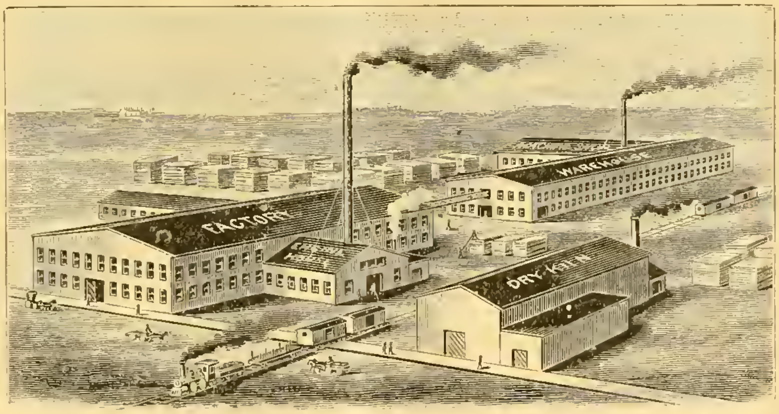
Since 1893 I have never produced less than 7,000 pounds of extracted honey, often much more, but have never had any left unsold when the new honey came on; and have not had a complaint for two years about honey granulating.

For the last two years I have sold several thousand pounds through a commission man in Durango. He ships honey to all the mining towns in southern Colorado, and as a result of the advertising given by my labels, I have shipt a lot of 60-pound cans to places that I never would have had orders had it not been for my labels on the pails, and stamp on sections.

I have made quite a home trade with the neighbors by trading honey for hay, wheat, beef or any other commodity. Many of our neighbors who used to think honey was only a luxury, now lay in their winter supply of honey as regularly as they do their flour and meat. For the home trade I buy coal-oil and gasoline cans, and cut the top out to insure their being well cleaned. These are filled early in the season, and a cap of white cloth put on. They granulate in a couple of weeks, and are ready to take anywhere. These are sold at $4.50 per can. The large lard-pails sell for 60 cents, and the small ones for 40.

There has been considerable competition lately, but I make it a rule to put nothing on the market that is not first-class. I don't know where we shall end, as prices get lower almost every year, and as production increases I am afraid that we shall be obliged to give up the business. I believe I have mastered this granulated-honey business, in my neighborhood at least, but I can't control the price. I hope that other members may be able to tell us how to better that.

Mrs. A. J. Barber.



The Bee-Supply Factory of Page & Lyon Mfg. Co.—One of Our Advertisers.

Pres. Aikin—We might say that co-operation is intelligent operation. If all other lines of business organize, what can an individual do? Also the vastness of our country is such, that only organized machinery can properly reach it. I marketed last year 5,500 pounds of extracted honey nearly all in our own market. As a rule, when once taken, it is taken again. The product must be brought before the people. Extracted honey is the most poorly packt of all syrups. Do you expect the retail dealer to retail from a wholesale package? Just so long as you do we will never have a market. Even E. R. Root says the public will not take it candied. It is simple. Mrs. Barber has convinced her customers. I have sold many three and five pound packages of granulated honey. I tell my customers that I would have to melt it up, and that they might as well save me the trouble. Some prefer it thus for carrying to the mountains.

H. Rauchfuss—We should adopt an original label, registered, as a guarantee that the honey is pure. It will increase the consumption. We have given jelly-glasses of honey to those who never ate it, and afterwards sold them 10-pound packages. If we could organize and adopt an original package, we could sell all our honey.

Mr. Whipple—I had considerable honey left over the first year I started in. I made it into vinegar. Since then I have not had enough honey left over to make all the vinegar I can sell. A demand for extracted honey has arisen, and I have bought some.

Mr. Pease—What is the market price of honey here in Denver?

Mr. Liebbardt—There is no market price. There never will be as long as present conditions continue. Will adulterated honey granulate?

Pres. Aikin—I think not.

Mr. Liebbardt—Then that is one of the main points that ought to be brought out, to show the purity of your honey.

F. Rauchfuss—California white-sage honey and some Cuban honeys will not granulate for a long time. But we have no honey in Colorado that will not granulate in a short time.

Mr. Brock—As to the market price, I askt 10 cents for my honey. A man said he could get honey for 6 cents. But I sold him 20 pounds at 10 cents.

Mr. Rhodes—I sold 5 to 6 tons per year several years ago of extracted honey in just one or two streets, by giving away tastes. The thing is to get honey to the people. Where we would sell a pint to begin with we would afterward sell much larger quantities.

Pres. Aikin—As a result of my work, The A. I. Root Co. say that if no other firm will take up the matter they will, providing bee-keepers take carload lots of cans. In the Canadian Bee Journal Mr. Holtermann says he is backt by the Goold, Shaply & Muir Co., in obtaining a suitable retail package, which sells itself, and can be packt in a 10-cent flour barrel, and shipt as granulated honey in barrels at a low rate of freight. I packt 30 four-pound pails in a 5-cent lime-barrel and shipt it as honey in barrels, at fourth-class freight, to Kansas at half the cost of former shipments. The Western Freight classifications of honey, as furnisht by F. Rauchfuss, are as follows:

In pails and cans, double 1st; in cans boxt, 4th; in glass jars boxt, 2nd: in tumblers boxt, 1st; in kegs, 4th; in barrels or casks, 4th; in boxes with glass fronts, 1st; granulated in pails, boxt, 2nd.

Mr. Pease—My sweet clover honey has not granulated. Suppose our honey does not granulate?

Pres. Aikin—That is why we must adopt a standard package that is sealed. Alfalfa honey, too, when it has once been melted, hardly ever gets really solid again, but consists of granules mixt in the liquid. It stays that way several years. I sold my extracted honey at a low price. I reasoned this way: If I pay freight, etc., how much have I left? About as much as California producers get, and we all know what that is. But here are a lot of poor people buying syrups; my neighbors have just as good a right to get it cheap as some commission-man. Granulated sugar makes a good syrup. It is a matter of cheapness. So I aimed to keep the price somewhere near that of granulated sugar. And advertising pays. I got more for my honey than if I had shipt it. If we produced 10, 20, or 100 times as much there would be a market for it. It would take the place of sugar and glucose.

Mr. Liebbardt, there has been a discussion about the relative merits of tall and square sections. Here are two sections of honey, one tall and one square. Which do you prefer?

Mr. Liebbardt—The square one. If the tall sections were adopted, we would have to prove they had not been trimmed off. The eye desires a perfect shape.

[Continued next week.]

The Wood Binder for holding a year's numbers of American Bee Journal, we propose to mail, postpaid, to every subscriber who sends to us 20 cents. It is a very simple arrangement. Full printed directions accompany each Binder. Every reader should get it, and preserve the copies of the Bee Journal as fast as they are received. They are invaluable for reference, and at the low price of the Binder you can afford to get it yearly.

◆

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 20 cents; 100 for 35 cents; or 200 for 60 cents.

◆

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Formic Acid in Honey.

In what manner does formic acid get into honey? Can it be extracted from the honey? If so, how? ONTARIO.

ANSWER.—The best authorities seem to think it gets into the honey through the circulation of the bee. Probably there is no practical way by which you can get it out of the honey, and probably it wouldn't be a good thing to get it out if you could.

◆

Managing an Out-Apiary.

I am going to start an out-apiary this season of about 60 colonies, and will run them for comb honey. I want to tend the out-yard and home-yard alone. Please give the full management.

MICHIGAN.

ANSWER.—To give entire management of an out-apiary would take many times the room allowed in this department. It involves all that is involved in the management of the home-apiary, the principal points of difference being—at least in your case—that there is no one at hand at all times to watch for swarms. A queen-trap in front of each hive or some other plan must be used. Much information as to management of out-apiaries is given in Root's "A B C of Bee-Culture."

[We mail this book for $1.25, or club it with the Bee Journal for one year—both together for $2.00.—EDITOR.]

◆

Questions on Shallow Brood-Chambers, Etc.

1. Please give your ideas of the advantages and disadvantages of the Heddon or double-shallow-brood-chamber.

2. If you were to use double-shallow-brood-chambers, what kind would you recommend—the Heddon closed-end frames with screws, or two of our regular supers, $5\frac{3}{4}$ high with Hoffman's half-depth frames, $5\frac{3}{8}$?

3. Could we not use thumb-screws with the Hoffman frames and invert them if necessary?

4. Would the bees build brace-combs between the brood-chambers?

5. In this section we do not get over 30 pounds of nice honey from each colony; this we get from sourwood, and is nearly our last honey plant or tree. Now to change the brood-chambers just when we wanted the bees to store this sourwood honey in sections, would they not carry the dark honey already in the brood-chamber up into the sections, and also the sourwood? Then, of course, they would not have anything to winter on. I think it would be all right to change brood-chambers, invert them if they would not carry what honey they had in the brood-chambers into the sections. How is this?

6. How would it do to use two brood-chambers up to the sourwood flow, and then put all the bees into one brood-chamber, $5\frac{3}{4}$ high, until the sourwood flow is over; in the meantime keep one or two colonies, and put the extra brood-frames or hives on these colonies, and let them store honey in them, and after the flow put them back on the original colonies for winter?

I do not think it advisable to scatter these extra brood-frames over weak colonies, as the original shallow brood-cases would not have enough to winter on after sourwood flow. It would be very nice to give the extra frames to weak colonies if the original colonies could store enough to winter on. I have been using the Langstroth 8-frame hive, but it's very hard to get bees into the sections. I cut one of them down to about five or six inches last season, and got 24 pounds of nice sourwood honey from it, while I got scarcely nothing from the others, except when I cut it out of the brood-frames.

7. What about queen-excluding boards for these shallow hives? Do you lay the queen-excluder down flat on the brood-frames, or a bee-space between the brood-frames and queen-excluder?

8. Does inverting these brood-chambers make bees tear down queen-cells? If so, this would be one good point.

9. In using a bottom-board $\frac{7}{8}$ high, or a bee-space ($\frac{3}{8}$ as in the Danzy hive), would the bees not build brace-combs between the bottom of the hive and brood-frames? And again, would $\frac{7}{8}$ high not hinder them from reaching or climbing up to the brood-frames with a load of honey?

10. How about the fence-separator and tall sections?

NORTH CAROLINA.

ANSWERS.—1. Not having had practical experience, which you have had, I can hardly give anything that would be of value to you.

2. I should prefer those that would hang true without any screwing together.

3. Yes, but if I were going to use thumb-screws, I should much prefer the Heddon frames. They will go together more solid than

the Hoffmans, which come together only part of their length, and have one sharp edge that, under the pressure of the thumb-screws, might cut in more than desirable.

4. Probably to some extent.

5. If they don't carry up the honey from the inverted combs, what object in inverting? Probably, however, the honey would not be carried up in all cases.

6. Concentrating the force of the colony in less space just as a flow is beginning, will, of course, have a tendency to compel them to store in the super, and may work all right, providing there is no trouble about winter stores and the colony being too weak afterward. But in the main it is probably better to have colonies powerful enough to work in supers without such cutting down. One season of failure I had just one colony that gave me a super of honey, and that was a colony with 16 Langstroth frames. If you have a bait section in a super there is little trouble, but they will store surplus in it if they are strong enough to store, and there is anything to store from. The point to aim at is to have colonies as strong as possible at the time the main flow opens. Possibly your colonies might be stronger to good advantage. It might be that you would not do badly to try the plan of John F. Gates, who gets good crops of honey by keeping strong colonies in big box-hives. But he doesn't get a pound of surplus from these colonies. He gets swarms from them, hives the swarms in small hives, gets his crop from these small hives, and after he has taken the crop breaks up the colonies in the small hives, relying on his big hives, or "breeders," as he calls them, to build up for winter and swarm again the next year.

7. It depends upon the kind of excluder you have. If you have merely the sheet of zinc, that can lie flat upon the top-bars. But you will probably be better satisfied to use an excluder with slats that will make a bee-space between top-bars and excluder.

8. It cannot be relied on.

9. They are not likely to build brace-combs, but in the course of the season they will build up little hummocks of propolis here and there, making it appear as if they were making something to climb upon. Theoretically they ought to be troubled no little to do so much climbing. Practically I never could see any bees waiting for their turn to get up, even when there was no chance to get up except a block at each corner.

10. As yet they have been tried by comparatively few. I think no adverse report has come from any one who have tried them, but some who have not tried them strongly oppose them.

Putting Bees Out Early.

I see by the Bee Journal that you have put your bees out. Why, what does that mean? I thought you always kept them in till they could gather honey and pollen!

I have been in the habit for years of putting my bees out as early as possible on any fine day so they can have a good flight. You see, by doing so, they commence to breed and have a lot of young bees to take the place of old ones when warm weather comes.

I put mine out on March 14, and since then we have had just such weather as I like, for it keeps the old bees in and prevents a good deal of what is called "spring dwindling."

Kane Co., Ill. GEO. THOMPSON.

ANSWER.—This year I wanted to try the experiment of copying you Fox-river bee-keepers, so I put out 20 colonies March 14, the same day you put out yours, and left the rest to be put out the usual time—when soft maples bloomed and all things pointed to the opening of spring. But that time came only two days later, when maples were blooming, and frogs and meadow-larks singing. So I began putting out the rest March 17, and the two times of putting out were so close together that I don't know any more about the matter than I did before. Maybe I'll live to try it again next spring.

Experiments with Six-Frame Hives.

In answer to your question on page 763 (1897) I would say: I have wintered from 10 to 25 colonies of bees in six-frame hives for four years, and I am now beginning the fifth winter. I have been doing this as an experiment for the sole purpose of finding out the best hive for general purposes, especially for the farmer bee-keeper. I have been doing this experimenting for over 20 years, along with other business, and have experimented with all kinds of hives, and the hive which I shall describe is not just the exact one that I want, but I have in my mind's eye to-day a hive which I believe will be perfection for an all-purpose hive. I am going to experiment next season, and then as soon as I can find a suitable location I will engage in the bee-business as a business.

The hive which I have used for the last five years is a six-frame one, size 8¾ inches wide, frame 17 inches long, inside measure, and eight inches deep; top-bar 1½ inches wide and one inch deep, ¼-inch bee-space with ¼ inch to divide in seven parts to space.

I fed one fall (1895), as there was no honey to gather in this country, and this gave me a splendid chance to experiment. So I took one six-frame, one eight, and one nine-frame hive, and gave them equal amount of sugar, and then did not look at them again until the last of March, 1896. Now, how did I find them? The eight and nine-frame had not a live bee on them, but the six-frame was in fair condition, and had some stores yet. So this was good proof which hive was best for wintering.

Still one more experiment: June 20, 1897, there came out a nice swarm from an eight-frame hive, and before I had time to hive it, out came another from a six-frame, and as a matter of course settled with the first swarm. Now I said to my wife, "Here is a good chance for an experiment," and we hived them in a 12-frame hive, and the next day another six-frame colony cast a swarm, and we hived it in a six-frame hive. Now, what did I get in the way of surplus? I got 35 pounds of fine honey from the 12-frame, and 48 pounds of the same kind from the six-frame. Please tell me which hive you would rather keep as a business hive, the 12 or the six. I know.

I want double-wall hives, and also want a follower both in the hive-body and in the surplus arrangement. I do not feed in the fall—March and April is the proper time to feed.

My colonies get very strong in six-frame hives. Five the past season averaged 130 pounds each of comb honey; best one 134 pounds, while the best I got from my nine-frame colonies was 70 pounds, and the eight-frame 94 pounds. These are the best. Now, these are big yields for this part of the county. They probably do not occur more than once in 10 years, altho I would like to see them often.

I prefer this hive because it takes less lumber to build it. A colony will give more surplus of comb honey, and it takes less honey to winter—three very important points. In five years' use I have only found the queen in the sections twice. Of course, Doctor, you are aware that it will take somewhat closer attention to use a six-frame hive than it will to use a larger one, but I think I got good pay for my watchfulness. I wish I could see you and describe to you the kind of hive we need. When I say "hive," I mean everything complete—hive, supers, frames and all.

If I have done you some good with this scribbling, I am happy indeed. DAVID N. RITCHEY.

Franklin Co., Ohio.

ANSWER.—Mr. Ritchey, when one can get such results as you mention, it hardly seems that his practice can be much out of the way. Still, a question may yet be raised whether you would get the same results if you used exclusively six-frame hives. There's John F. Gates (I wonder if John has gone to sleep; I haven't seen anything from him for some time) he gets all his honey from very small hives, and he also has some very large hives from which he gets no honey, but he counts that his large hives are the most important, for he gets rousing swarms from them, and these swarms when hived in the little hives give him good crops, but he doesn't carry the little ones over winter.

There are certainly advantages in the small hives, and it's a big advantage to have such little fellows to handle, and altho you say they need closer watching, I'd be willing to give the closer watching if they'd give right results. You do not say whether in any case you have kept the same colony straight along for several years in a six-frame hive. That would be a better test. Possibly you have done so, but you don't mention it. For, in a locality where the main harvest comes directly after swarming-time, if two swarms are of equal ability, the one put in a six-frame hive ought to give more surplus than the one in the eight-frame hive, because it puts less honey in the brood-chamber. But the question is, how would they compare the following year? Can you have as strong a colony with five or six frames of brood as with seven or eight?

It will be interesting to know if you have compared the two hives separately for several years, and can give us results. I should not expect so strong colonies in six frames as in more, but the proof from the bees themselves is the most conclusive.

Pestered with Ants—Carrying Out Larvæ.

1. Here in Southern Indiana, when we take our honey off and store it away for future use, the ants get into it and carry it off and destroy it to such an extent that they are a great nuisance. What can we do to prevent it?

2. I have three colonies that are carrying out young brood, and occasionally I see a moth among the dead larvæ on the alighting-board. What is the cause? INDIANA.

ANSWERS.—1. Various means of dealing with the pests have been suggested, but really the best thing is to have the honey in ant-tight cases, so the ants can't get at it all. In the meantime you might try a sponge lightly filled with sweetened water—altho it will be necessary to exclude them from the honey if you want them to attack anything less sweet—and then when the sponge is covered with ants, dip it in boiling water.

2. If the brood is somewhat mature and the number not very great, it may be that wax-worms have injured the brood so it is carried out. That's not very likely to be the case thus early in the season. More likely the brood carried out is mostly young and white, and the brood is destroyed because starvation has come. Unless stores are obtained from some source the end may not be far off.

The Names and Addresses of all your bee-friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums we are offering. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.

☞ See "Bee-Keeper's Guide" offer on page 205

AMERICAN
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Better Cleaning of Section-Honey.—Slovenly and careless bee-keepers will soon be at a great disadvantage. Section-honey will soon be freer from propolis and other stains—when the new section-cleaners get to work. What sense is there in shipping off to market a lot of "dirt" on sections of nice honey? The past winter we bought a most beautiful lot of clover honey, one 24-pound case of which we were to get 25 cents a pound for from a Chicago millionaire. What did we do? Why, we simply took out every section, scraped all *clean*, and then put it into a new case, as the case in which it had been shipt was a coarse, rough, home-made affair. That honey had a 50 per cent. better appearance after we put it into respectable shape.

Some bee-keepers are losing money every year on account of their shiftless, careless methods. And there can be no excuse for it at all. If a bee-keeper (man) is color-blind, or blind to uncleanness, then for pity's sake let the women of the household prepare the honey for market. Let them clean the sections of honey, grade them, and put them into shipping-cases. We venture in most instances the honey would bring a cent more a pound. We have great faith in the work done by women. They are close friends to neatness and fine appearance—having practiced so much on themselves!

Best work everywhere always finds least competition. Try it.

◆

Langstroth Monument Fund Again.—On page 201 we had this to say in reference to the proposed Langstroth Monument Fund:

"We are inclined to think that before bee-keepers will be satisfied to let this matter rest, they will want to see at least $1,000 put into a monument to mark the resting-place of their beloved Langstroth. Why wouldn't it be a good plan for the large manufacturers of hives to contribute—oh, say about a couple hundred dollars each? Their prosperous business is practically the result of Langstroth's invention. And as bee-keepers are helping to support the manufacturers, indirectly it would be the bee-keepers' tribute to the memory of Langstroth."

Editor A. I. Root, in Gleanings for April 15, after quoting the foregoing paragraph, followed it with this:

"Personally it seems as tho our good friend York had got the figures a little high; but, never mind; if the bee-keepers of the world think we should invest $1,000 in this direction, The A. I. Root Co. will try to do its part. We therefore raise our contributions from $10 up to $25. If the other supply-dealers feel like contributing liberally also, we will increase our subscriptions to $50."

Now Mr. Root is getting down to business. We thought all he needed was just a little stirring up on this question. People who are *able* to do great things ought to do them. *We* should like very much to match the figures mentioned by Mr. Root, but we are not doing the amount of business, and have not the capital, to justify us in doing likewise. Our own subscription of $5, proposed in last week's Bee Journal, we feel is equal to about a $200 subscription by the Root Company, when you come down to a comparison. But it isn't necessary to make comparisons, and we have made it only to show that it is right to expect great things from those who possess greatness.

But the right way is for each one to do what he or she knows he can justly and honestly do regardless of what any one else does. We cannot all know each other's circumstances, and so we are liable to misjudge in things of this kind.

We trust that this matter may soon take definite shape, and be carried through to a speedy, successful and satisfactory end.

◆

Getting New Subscribers.—This is a good time of the year for many of our readers to get new subscribers for the Bee Journal. There are just thousands of bee-keepers all over this great country of ours that ought to be reading it every week, and thus learn how to make their bees more profitable. They would also learn the folly of ruining the honey market both for themselves and for their neighbor bee-keepers who are already reading the Bee Journal.

A good many of our readers have done nobly already in securing new subscribers, but there are more who have not made any attempt along that line. From time to time we offer some generous premiums to our present readers for the work of getting new subscribers. We often wish we could make them more generous, but the subscription price of the Bee Journal will not admit it.

Why not within the next month or two add several thousand new readers to our list? Will *you* help? If so, we will make our *present* readers this special offer on *new* subscriptions for the balance of 1898—about eight months:

Send us 60 cents, and we will mail the Bee Journal the rest of 1898 to any new name and address, and also allow, as *your* premium, 20 cents of the amount to apply on any of the books found in our book-list, on page 267 of this number, that you may select. The new readers would get about 35 copies of the Bee Journal for only 60 cents; and *you* would get a third of that amount in books. But remember there is no additional premium for the new subscriber on this offer.

Now, why not every reader, so far as possible, try to send in a few new subscribers on the above offer?

◆

Making a Fortune with Bees.—Of course we mean in the production of honey? Editor Hutchinson gives this answer to that question, in the April Review:

"The man who makes his fortune in the keeping of bees must now keep a lot of them; scatter them around in out-apiaries, and then adopt such implements and methods as wil enable him to secure the honey with the least possible labor. It is not a question of how can I secure the most honey per *colony*; but, of how can I make the greatest profits. This is the broad sense in which bee-keeping must be viewed if we are to reach the highest commercial success."

Mr. Hutchinson, in the same editorial from which the above paragraph is taken, speaks of a neighbor bee-keeper who had been to Detroit to sell honey, "and found that the finest white comb honey could be bought for only 10 cents a pound." Then he quotes his neighbor as saying:

"Of course, there is a profit in it at that figure; but, I tell you, a fellow has got to produce a lot at that price to make anything."

But is there any necessity for the best comb honey selling at 10 cents per pound? We say *no*. There was no need of the price of honey going so low in this city the past winter. As we said some time ago, had it not been for a few unwise bee-keepers themselves coming in here with their own crops, and selling at too low a figure, and direct to grocers, we believe there would have been no necessity for commission-men to lower the price in order to effect sales. Our own experience in the honey-business the past winter proves that. And what applies here will apply in almost every other city. The trouble is, the whole honey-business is on a wrong basis; and until there is some sort of co-operation among bee-keepers themselves, we fear they never will realize a just price for their best honey in the city markets.

We have found that the majority of honey-consumers are not so very particular as to the price, if they only are satisfied that they are getting the *pure* article when they buy. And right here is where a national pure food law would help amazingly.

There is much more that could be said along this line, but we will reserve it for future occasions.

◆

The Connecticut Convention.—The seventh annual meeting of the Connecticut Bee-Keepers' Association will be held at the Capitol, at Hartford, Wednesday, May 4, 1898, commencing at 10:30 a.m. The topics for discussion are as follows:

1. Is it any profit to the ordinary farmer to keep bees?
2. Which are the best, loose or tight bottom-boards?
3. Has the plain section and slat or fence separator any advantages over the section with bee-way?
4. Is it necessary to cover the sections in a super? If so, what is the best covering?
5. Are the wax-scales that fall to the bottom of the hive ever used by the bees?
6. How can queens be easily found?
7. Is the honey in our State adulterated to any extent?
8. Is there need of additional State laws for the protection of the food-consumer?
9. How can a demand for honey be developt?
10. Should a colony of bees be left queenless through the winter?
11. Does any one know of a case of foul brood in this State?

Mrs. W. E. Riley, 54 Hawkins St., Waterbury, Conn., is the Secretary, who can be addrest for further information, if desired.

◆

Wing-Strokes of Bees.—The San Francisco Post reports that "a captive bee striving to escape has been made to record as many as 15,540 wing-strokes per minute in a recent test." That is almost be(e)wildering to think of.

◆

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

THE WEEKLY BUDGET

Mr. M. M. Baldridge says in the Bee-Keepers' Review, that he thinks the great value of sweet clover as a soil-renovator comes chiefly from its dense shade.

Mr. John Newton—a successful young bee-keeper of Canada—is writing for the American Bee-Keeper. Mr. Newton's portrait graces the April number of that paper.

Mr. T. F. Bingham, of Clare Co., Mich., wrote us April 11:

"Bees have wintered well about here. My apiary gathered pollen yesterday and to-day."

Mr. H. Lathrop, of Green Co., Wis., wrote us April 8:

"The bees are placed on the summer stands. There has been little or no loss, and I never saw bees stronger or better supplied with stores at this season of the year."

Prof. Max Muller had this to say along the spelling-reform line:

"English spelling is a national misfortune; it is unintelligible, unhistorical, and unteachable."

Mr. S. T. Pettit, of Ontario, Canada, writing us April 18, said:

"The spring is here again, and all Nature seems to rejoice. Neither the bees nor the birds seem to carry any bitter grudges in their loving little hearts. I wish we were as good."

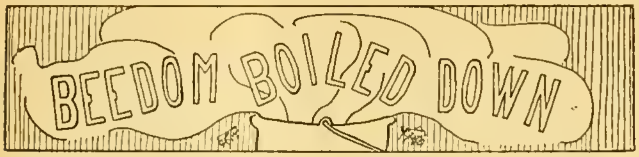
Mr. J. B. Wilhelm, of Seneca Co., Ohio, wrote us April 9:

"We have so many bee-keepers that are penny wise and pound foolish. They are so saving that they cannot afford to take a good bee-paper, and lose more than enough to pay for a number of them, provided they would follow the instructions and advice given in the papers from time to time. A person's life is too short to learn all by experience about the production of honey."

Just so, Mr. Wilhelm. It is surprising, the number of bee-keepers there are that seem determined not to learn how to keep their bees more profitably. But "where ignorance is bliss," etc.

The New York Voice, publisht at 30 Astor Place, New York, N. Y., is perhaps the most powerful newspaper the temperance reform ever had. It has lately been investigating the surroundings of some of the larger colleges and universities of this country, and the condition of things that it has disclosed is enough to congeal the blood in every respectable man's veins. It has found that in some instances the students seem to devote more time in an attempt to see how they can distinguish themselves as drinking hoodlums and bums, rather than for high morals and intelligence. We believe that when parents once really learn that others have been rearing sons and sending them away to become drunkards, gamblers and moral lepers, they will be careful to select the college for *their* sons that is dead against the saloon, and bawdy-house accompaniment. What a shame that our American youth should find themselves in institutions of learning where the president and professors lend their influence toward encouraging the drink evil! Send for a free sample copy of the New York Voice, then subscribe for it, and learn about its great work. Price, $1.50 a year.

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for $1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at $1.00), and 10 cents extra.



Horseradish for Stings is recommended in Le Rucher Belge. Apply the crusht leaf to the wound, and soon pain and swelling will disappear.

* * *

Weak Colonies and Propolis.—Editor Holtermann thinks a weak colony, other things being equal, is worse at propolizing than a strong one. If that be true, it is another argument in favor of strong colonies.

* * *

Does Crowding Induce Swarming?—It is generally believed that when bees are crowded for room in the brood-chamber it is an inducement to swarming, but Editor Holtermann now thinks that crowding hives in an apiary has effect in the same line, because of the "many bees humming, flying and roaring about in a limited space."

* * *

To Lessen Brood-Rearing after harvest in places where there is no late flow, and where rearing a large amount of brood is not desired, Le Rucher Belge advises contracting the entrance to the hive, as brood-rearing cannot be carried on without abundance of fresh air. Possibly there is a hint here for those Californians who desire to limit brood-rearing where there is no harvest.

* * *

How to Report Crooked Firms is considered by the editor of the Review. He thinks there is no use in saying a word unless you give the name of the firm, and then give such information as will allow reading between the lines that the firm needs watching. But if the law will not allow a journal to say in plain terms that a firm should not be trusted, would it not be equally liable for hinting it?

* * *

Carniolan Bees.—R. F. Holtermann, apiculturist of the Ontario Experimental Apiary, reports upon 12 colonies of Carniolan bees. They were very gentle, built up well in the spring, but the queens being dark were much harder to find than Italians. Swarms hived on full sheets of foundation did all right, but those hived on starters built very poor comb, having a large proportion of drone-comb, and swarmed excessively, without waiting to complete their combs.

* * *

Pettit's Divider.—F. A. Gemmill has used and likes it, and thinks a better name would be "perforated follower." The only objection is, that it makes just so much additional furniture, and a super will not hold so many sections, but the outside row is filled about the same as the center. R. F. Holtermann thinks it would be better to use perforated metal for dividers, as the perforations are exact, and they can easily be cleaned by throwing them in a weak solution of lye.

* * *

Temperature of Bees in Winter.—The bee is warm-blooded. According to some the temperature of a bee's body under normal conditions is 81.5°—according to others 95°. Some bees that were torpid in a temperature of 48° but brought to life in a temperature of 59°, showed a body heat of 77°. The cluster in winter is kept up to 50° to 53° at its outer part. When the surrounding atmosphere goes down to zero or lower, the bees in the center of the cluster run the heat up to 86° or more by means of eating and exercising. This increast heat in the center of the cluster is necessary so that the outer part of the cluster may not go below 50°, and explains how it is that breeding is commenced in colonies outdoors in winter, but not in cellared colonies. The center of the cluster in cellar is too cold for breeding, for it doesn't need to be heated up to keep the outer bees warm enough.—Dr. C. C. Miller, in Gleanings.

* * *

Coggshall's Way of Extracting.—According to the editor's report in Gleanings, W. L. Coggshall has a reckless, slap-dash way of working bees that would drive many a man wild. He seems to take no precaution against robbers, but pushes right ahead regardless. The robbers pounce onto the combs and the honey, and when a half-day's or a day's extracting is over there will be two to four inches of dead bees in the honey. But the honey being drawn off from beneath, there will be no bees in what leaves the extractor. The building in which the extracting is done being by no means fire-proof, when the extracting is over "the bees simply have *a glorious old spree cleaning things up.*" Before condemning this plan too severely, it may be well to ask whether the expeditious way in which Mr. Coggshall rushes things through may not partly account for the fact that he succeeds with about 1,000 colonies of bees, and makes money at it.

A peculiarity of his extractor is that a pair of combs are put in each side, being separated by a sheet of tin. When one side of the combs are emptied, instead of taking out a frame, turning it around and putting it back in the same place, two frames are graspt by one hand, two frames by the other, all four lifted out, and without any turning the frames simply change places. Sometimes, however, only one frame is lifted by each hand. In either case, what a saving of time!

* * *

Doolittle and Root on Plain Sections.—Doolittle and editor Root do not agree as to the advisability of adopting plain sections, as anyone will conclude after seeing the 2½ pages of Gleanings they tramp over in their tussle. Doolittle estimates that it would cost him $100 to make the change in his apiary, and allowing that only a fourth of the bee-keepers of the land should change, and that the average cost would be to them only a tenth as much, or $10 each, it would make a total cost of $1,000,000 to make the change to plain sections. He doesn't value the argument that the plain sections will be filled fuller, for lighter sections sell best. The extra price obtained for plain sections of honey he thinks is due to special pushing, without which the plain section would sell for no more than the other. Thinks when you come to count necessary cost of veneers for shipping-cases, there will be no saving.

Mr. Root thinks Mr. Doolittle overestimates the cost of the change, as old supers need not be thrown away, and instead of $1.00 per colony, he stipulates to make the necessary change for Mr. Doolittle for 40 cents per colony, on the basis of 25 wide frames per colony. He says if it is better not to have the outer row of cells sealed, a slight change in the fence will effect that, but urges the importance of sealing next the wood to secure safe shipping. Mr. Root meets the $1,000,000 outlay by saying the saving of expense for making bee-ways in sections, counted at 25 cents a thousand, providing one-fourth the bee-keepers use 5,000 sections a year, will amount to $1,200,000 every year.

It's a neatly fought battle, and the reader will very likely not have his opinion very much changed after witnessing it.

* * *

Facing Comb Honey.—Editor Root and Doolittle have been winking at the practice of putting the best sections next the glass in a shipping-case. Oh, but doesn't Hasty go for them in Review! What he says couldn't all be boiled down for this department. It wouldn't be safe. It's so hot that if it were boiled down any more it would set fire to the whole batch. He refers to Gleanings, page 175, and quotes the following from Doolittle:

"And I also claim that there is nothing out of the way, if any one chooses to do so, in shipping cases of honey having XXX faces and XX or X honey inside, *on commission.* Yea, more, I claim that there would be nothing *dishonest* in filling the center of the case with buckwheat honey, the same having XXX white honey facers, providing it was *shipt on commission*, every case alike, and the producer thought it to his interest to do so."

Hasty thinks when Doolittle said that, he was not laying at the sleek and wonderful Devil with the sword of the Spirit—not laying at him with the kick of an honest man—just gently stroking him down the back. "One almost listens to hear his majesty purr. Every trickster will feel bolder after reading that quotation." Referring to the argument that veneering is common and deceives no one, Hasty says: "'All our people do so' is the Congo cannibal's argument—does it prove anything? The fact that schemes to deceive purchasers are almost universal is only a peremptory call to arms for all those who have been listening to the Man of Nazereth....If we believe in warfare against the world, the flesh and the Devil, we must not be talking 'armistice' all the while."

This Boiler is not supposed to have opinions of his own—only a parrot to repeat what others say—but would like to lay down his stirring-stick long enough to give Hasty a very hearty grip with both hands.

Beeswax Wanted.—Until further notice we will pay 27 cents *cash* for all the good yellow beeswax delivered to us. We accept only that which is absolutely pure. If you want cash, and want it *at once*, send us your beeswax now. Be sure to put your own name and address on each package, when shipping. Then mark it very plainly—George W. York & Co., 118 Michigan St., Chicago, Ill.

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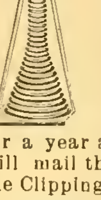

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Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

J. P. H. BROWN, Augusta, Ga.

EGGS From pure bred, barred P. Rocks Large and fine plumaged. $1.00 per 15. Also Light Brahmas and Black Langshans, same price. B. P. Rock Cockerels, $1.25.

MRS. L. C. AXTELL,
ROSEVILLE, ILL,

BEES! Florida Italian QUEENS!

Tested Queens, $1.00 each; Untested, 50c. 2-Frame Nucleus of Bees with good Queen $2. Prompt and satisfactory dealing.

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11Atf De Funiak Springs, Fla.

Williams' **Self Hiver and Trap.**—Something practical and economical. A combination Queen and Drone-Trap, used also as a self-hiver of swarms. Illustrated and described on page 131. Address for circular, GEO. W. WILLIAMS, Humansville, Polk Co. Mo.

16A2t Please mention the Bee Journal.

Bee-Hives, Sections, Shipping-Cases—everything used by bee-keepers. Orders filled promptly. Send for catalog MINNESOTA BEE-KEEPERS' SUPPLY MFG. CO., Nicollet Island, Minneapolis, Minn.

Convention Notices.

Connecticut.—The seventh annual meeting of the Connecticut Bee-Keepers' Association will be held at the Capitol, at Hartford, Wednesday, May 4, 1898 – 10:30 a m. Every bee-keeper in the State should take an active interest in this meeting. All are cordially invited.

MRS. W. E. RILEY, Sec.,
Waterbury, Conn.

Illinois—The spring meeting of the Northern Illinois Bee-Keepers' Association will be held at the residence of Alexander Patterson, 5 miles northwest of Rockford, Tuesday, May 17, 1898. All are cordially invited.

B KENNEDY, Sec., New Milford, Ill.

Sweet ♦ Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order·

	5℔	10℔	25℔	50℔
Sweet Clover (white).	.60	$1.00	$2.25	$4.00
Alsike Clover.........	.70	1.25	3.00	5.75
White Clover..........	.80	1.40	3.00	5.00
Alfalfa Clover.........	.60	1.00	2.25	4.00
Crimson Clover........	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

GEORGE W. YORK & Co.
CHICAGO, ILL.

Southern Home of the Honey-Bee

Is now ready for your orders for QUEENS of either **3 or 5 Banded Italians and Steel Gray Carniolans.** More than 300 Tested Queens to begin with. Untested, either race, 75 cts. each; June and until October 50 cents each. Tested $1.00 each. Good Breeders, $2 each. Straight 5-Banded or "Faultless" Queens, $5.00 each. Satisfaction guaranteed.

GEO. W. HUFSTEDLER,
Successor to Hufstedler Bros.,
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Muth's HONEY-EXTRACTOR Square Glass Jars.

Root's Goods at Root's Prices.

BEE-KEEPERS' SUPPLIES in general, etc etc, Send for our new catalog.
Practical Hints" will be mailed for 10c in stamps. Apply to—

Chas. F. Muth & Son, Cincinnati, Ohio.
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OUR PRICES are worth looking at. We are making the new

Champion Chaff-Hive

with dovetailed body and supers, and a full line of other Supplies, and we are selling them CHEAP. A postal sent for a price-list may save you $ $ $ $

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☞ IF YOU WANT THE

—BEE-BOOK

That covers the whole Apicultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keeper's Guide.

Liberal Discounts to the Trade.

PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y.
Please mention Bee Journal when writing.

BEE-KEEPERS! Let me send you my 64-page Catalog for 1898
J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing

GENERAL ITEMS

Winter Loss Light.

My bees are in good condition this spring. The winter loss was light. They have gathered lots of pollen, but not much honey yet.

Hamilton Co., N. Y. GEO. H. PORTER.

◆

A Beginner With Bees.

Last fall I bought a colony of bees, and after I had brought them home the man told me the queen was clipt. I started last spring with 2 colonies, and got 5 swarms. I have 7 colonies in the cellar now, that are wintering finely so far. I have a cellar built for bees, and nothing else. I keep the temperature from 2 to 4 degrees above freezing. I have a cloth over the frames, and the cover on with a wedge under it at the back.

F. E. KNAPP.
Wadena Co., Minn., Jan. 16.

◆

Cold Winter in Arizona.

We are having the coldest and most snow this winter that we have had in this part of the country for many years. The mercury runs down 12 degrees below zero. That is cold for this part of the country. We are located a little south of the 34th parallel of latitude, with an altitude of about 7,000 feet, but still my bees have been wintered on the summer stands in single-walled hives, and came out all right in the spring, but just how they will come out this spring is hard to tell at this time, but about 10 days ago they were all right. But I will not take such desperate chances another winter.

The honey crop in 1897 was very light here, owing to a dry time the latter part of May and first of June. The alfalfa did not yield much nectar. The American bee-plant which grows in great abundance here was fairly good. We don't have much sweet clover as yet. We are looking forward to a more profitable season this year.

JOSEPH A. LEWIS.
Navajo Co., Ariz., Jan. 27.

◆

A Report from Florida.

There was a severe drouth in this portion of Florida last summer, and many colonies of bees perisht. Their owners say that "the moths eat 'em up." Lately I visited an apiary of four colonies; they were very small, black bees, and very spiteful. I've never come across any amiable ones here. One of the colonies was very weak, and many small, black ants were coming and going from the entrance. I account for the loss of the colonies in this way: There is a small amount of honey gathered during the winter, which causes them to rear brood, and in the spring they are very populous. I was enquiring of a lady as to how many colonies of bees she had. She told me, and I said, "You had that many seven years ago." She replied, "I never save a swarm; they all go to the woods. I never know when they swarm." Bees are allowed to swarm themselves to death, as black bees will, and the old colony not able to defend itself, the moths take possession.

The yellow jessamine has been in bloom since January, and is blooming still. The cultivated vines, trained to houses, climb to the third story, and the wealth of yellow bloom is very beautiful. I saw a tall tree yesterday whose top bent and swayed by its weight, and bees fairly swarm upon the bloom.

The bees are holding high carnival now. The ti-ti is blooming, and the trees are white with its pretty racemes, redolent with perfume. Plums are through blooming, but peaches and pears are in all their glory. The Le Conte pear blooms in clusters, looking like hydrangea blossoms. I've counted 45 separate blossoms in one cluster. Dewberries cover the ground like a mat,

$100

Given as Bounties to purchasers of the improved Danz. Hives and Sections See schedule in my bee-book "Facts About Bees." Tells how to produce honey that sells for the most money. Free for 2c in stamps. Address

THE A. I. ROOT CO., Medina, Ohio.
or F. DANZENBAKER, Box 466, Washington, D. C.
Please mention Bee Journal when writing.

Excelsior Incubator and Brooder Cheap.....

200 eggs capacity. Good as new. Used for only two hatches. Everything complete. Will sell it for **TWENTY DOLLARS**, half the cost price

Address, **P. W. DUNNE,**
River Forest, Cook Co., Ill.
Please mention Bee Journal when writing.

Texas Queens

Best honey-gathering strain in America. Tested, $1.50. Untested, $1.00. Write for a Circular. **J. D. GIVENS, Lisbon, Tex.**

7A26t Please mention the Bee Journal.

HATCH Chickens BY STEAM—With the MODEL EXCELSIOR Incubator

MODEL
EXCELSIOR

Circulars free.
Send 6c. for Illus. Catalogue.

Simple, Perfect, Self-Regulating. Thousands in successful operation. **Lowest priced first-class Hatcher made.**
GEO. H. STAHL,
114 to 122 S. 6th St., Quincy, Ill.

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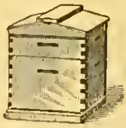

BEE-KEEPERS' SUPPLIES! Largest and Best equipt Factory in the

SOUTH-WEST.

Send for Catalog.
FRED A. DALTON,
1A26t WALKER, Vernon Co., Mo.
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C. B. BANKSTON

Is Rearing Queens in Cameron Texas,

And requests bee-keepers in the United States to write him with an order for a **GOLDEN QUEEN**—Untested, 50c; Tested, 75c. We breed the 3 and 5-banded Italians, and Silver Gray Carniolans.

Safe Arrival Guaranteed.
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"WATCH POUDER'S AD"

SEE THAT WINK!

Bee-Supplies! ROOT'S GOODS at Root's Prices.

Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Catalog free. Walter S. Pouder,
512 Mass. Ave.,
INDIANAPOLIS, INDIANA.
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Queens, Bees and Bee-Keepers' Supplies

Tested Queens in April and May, $1.00. Untested, 75c. Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

F. A. CROWELL,
8Atf GRANGER, MINN.
Please mention Bee Journal when writing.

For Sale Cheap 90 colonies of Bees in lots to suit; in prime condition For particulars address, W. SPENCER, Bunker Hill, Ill. Box 114. 14A4t
Please mention Bee Journal when writing.

and are white with bloom, and are favorites with the bees. Phlox drommondi comes up in the fall, grows all winter, and is now in bloom. In some yards it is so thick that the ground is not visible, and waves in the wind like a field of grain; it is in all the colors of the rainbow, and is a lovely sight.

I have planted sweet clover every year, but have never been rewarded with a single plant. Early in January I planted crimson clover, and it came up in four or five days, as the weather was warm and damp. I transplanted some, and it is growing beautifully. Mrs. L. Harrison.

Washington Co., Fla., March 24.

Dry Winter in Colorado.

We have had a very dry spell, not half the snow of last season, and a terrible lot of wind. We had it warm for a time, but two days this week have been below zero. I put no work on my bees when starting into the winter, on their old stands, but the whole 39 are all right at present. Last year I set a row of Russian sunflowers on the southwest side of a number of my hives, and I think it will prove the best of shade. The hives face southeast, because most of our strong winds are from the northwest. The sunflowers are hardy; the seed can be put in at any time to come up when it likes.

Walter A. Varian.

Weld Co., Colo., March 23.

Qualities of Honey.

We sometimes see the statement that the Italian bees produce a finer quality of honey than the blacks or others. If it is a proper question, I wish to ask the wise ones how it is, when *all* have access to the *same* forage? *If*, as some say, the bees *make* the honey, then we may account for it on the supposition that the Italians are better mechanics or chemists, and are endowed with a more elaborate and perfect mechanism. Or if, as is said, they have a longer labia, and can work well on red clover, then we may account for it that way. I have talkt with old bee-keepers and all have said they never saw any honey-bee—red, blue, black or yellow—that workt on red clover enough to cut any figure.

One veteran said he once stood in a large field of red clover when a mower was at work, and noticed a big lot of bees following the mower, and swarming on the new cut clover, presumably after the sap, but not a bee on the standing clover. And how is it in localities where there is little or no red clover? I am not a "kicker," and pick bones with no one—I simply ask for information, and when in search of knowledge, where do we go but to the wise? And if, on bee-questions at least, they are not found in the "Bee Journal family," where are they? A. W. Hart.

Stephenson Co., Ill.

[Here is a chance for some one to distinguish himself.—Editor.]

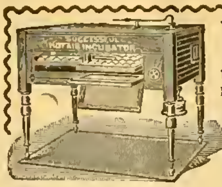
A Mississippi Bee-Man's Experience.

I agreed to let you know how I came out after the overflow of 1897.

Well, I had about 100 very weak colonies left. The water staid just seven weeks. I never saw bees swarm as they did. I saw as many as 7 swarms go to the woods in one day. The water was so deep and the trees so high I could do nothing but let them go.

I commenced to build them up. I never saw bees do better. I got over a ton of extracted honey, and sold over 30 queens, and wintered 210 good, strong colonies with a loss of only one. Bees are just booming. Drones are flying, young bees are having a jubilee every day, coming out of the hives. You would almost think they were swarming. I am going through all of them and clipping all the queens' wings that I am keeping for honey-gathering. I am working about 100 for extracted, about 25 for comb honey, and the balance I am breaking up for nuclei. Some of my colonies have brood in as many as 7 frames.

Willow is just in bloom, and there are



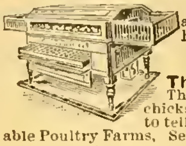
WHERE OTHERS FAIL

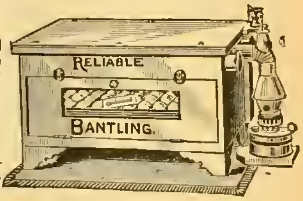
the **SUCCESSFUL INCUBATORS** succeed, why? because they are properly constructed and the correct methods for operating them are plainly set forth in our 72 page Direction Book. Our machines will please you. Prices reasonable. All sold under a positive guarantee which we ask you to compare with others. Send 6c stamps for 128 page catalog and poultry book combined. ***It will pay you.*** Address

DES MOINES INCUBATOR CO., Box 78, Des Moines, Iowa.

THE HATCHING HEN

HAS LOST HER OCCUPATION





and in the production and brooding of chicks she has been supplanted by the better and everyway

RELIABLE INCUBATORS AND BROODERS

They Hatch and Brood when you are ready. They don't get lousy. They grow the strongest chicks and the most of them. It takes a 224 page book to tell about these machines and our Mammoth Reliable Poultry Farms. Sent by mail on receipt of 10 cents. Send for it now.

Reliable Incubator and Brooder Co., Quincy, Illinois.

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We want

EVERY BEE-KEEPER

......To have a copy of......

Our 1898 Catalog

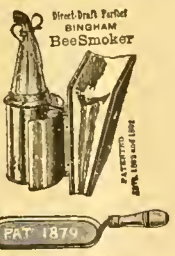
☞ Send us your name and address and we will take pleasure in mailing you a copy

G. B. LEWIS CO., WATERTOWN, WIS.

Special Agent for the Southwest—

E. T. ABBOTT, St. Joseph, Mo.

Mr. Abbott sells our Hives and Sections at factory prices.



Bingham & Hetherington Uncapping-Knife.

PRICES OF BINGHAM PERFECT

Bee-Smokers and Honey-Knives!

Smoke Engine (largest smoker made)	4-in. stove.	Doz. $13.00;	each, by mail,	$1.50
Doctor	3½ in. stove.	Doz. 9.00;	"	1.10
Conqueror	3-in. stove.	Doz. 6.50;	"	1.00
Large	2½-in. stove.	Doz. 5.00;	"	.90
Plain	2-in. stove.	Doz. 4.75;	"	.70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz. 4.50;	"	.60
Honey-Knife		Doz. 6.00;	"	.80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4 inch Smoke Engine too large.

January 27, 1897. Truly, W. H. Eagerty, Cuba, Kansas.

Mr. Bingham, Dear Sir:—Please send per mail a 4-inch Smoke Engine. I have one of your Smokers; it is too small in time of trouble.

February 21, 1898. A. F. Seward, Riverside, Calif.

9A9t **T. F. BINGHAM, Farwell, Michigan.**

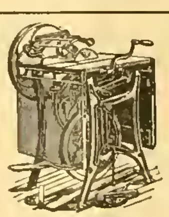
COMB FOUNDATION Wholesale and Retail.

Working Wax Into Foundation for CASH **A Specialty.**

Hives, Sections, and a full line of Supplies. The **best** of everything. Write for Catalog, with prices, and samples of Foundation and Sections.

BEESWAX always wanted for cash or trade.

GUS DITTMER,
AUGUSTA, WIS.



ONE MAN WITH THE

UNION COMBINATION SAW

Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing, Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery. Sold on Trial. Catalogue Free.

SENECA FALLS MFG. CO.,
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LEAHY MF'G CO.
INDEFATIGABLE
HIGGINSVILLE, MISSOURI.

Ho, for Omaha!

As we have many customers in the Northwest, and believing they will appreciate the low freight rates obtained by purchasing goods from a railroad center nearer to them than we are, getting a direct through-freight rate, thus cutting the freight in half, we have establisht a branch house at 1730 South 13th St., Omaha, Neb., where we will keep a complete line of all Apiarian Supplies, the same as we do at Higginsville, Mo. With the quality of our goods, we believe most bee-keepers in the West are already acquainted, but to those who are not, we will say that our goods are par excellent. Polisht, snowy-white Sections, beautiful straw-colored transparent Foundation, improved Smokers and Honey Extractors, and all other first-clas sgoods, are what we sell. Kind and courteous treatment and honorable dealing our motto. On these bases, we solicit an order, feeling sure that if we sell you one bill of goods you will be our customer in the future.

☞ Progressive Bee-Keeper, 50c per year. "Amateur Bee-Keeper," 25c. Both for 65c., postpaid. Sample copy of the Progressive free, and a beautiful Catalog for the asking.

Address, **Leahy Manufacturing Company,** **Higginsville, Mo.,** or **1730 South 13th St., Omaha, Neb.**

Page & Lyon Mfg. Co. New London, Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

Please mention the American Bee Journal. 7Atf

FENCE.
SEE THAT TWIST!!!

The twist is what makes the Kitselman Fence famous. With our Duplex Automatic Machine you can make 100 styles and 60 rods per day of the Best Woven Wire Fence on Earth, Horse-high, Bull-strong, Pig-tight FOR 18c. PER ROD Chicken fence 19c. Rabbit-proof fence 16c. and a good Hog fence for 12c. per rod. Plain, Coiled Spring and Barbed Wire to farmers at wholesale prices. Catalogue FREE for the asking. Address, KITSELMAN BROTHERS. Box 138 Ridgeville, Indiana.

45Dtf Please mention the Bee Journal.

Van Deusen Thin Foundation...

We have several 25-pound boxes of Van Deusen Thin Flat-Bottom Comb Foundation for sale, at $12.50 per box. This Foundation is preferred by many. As we have only a few boxes of it, an order for same should be sent promptly. Address **The A. I. Root Co.** 118 Michigan Street, Chicago, Ill.

The Largest and Most Complete Stock

Of Bee-Keepers' Supplies in the Northwest. The very latest up-to-date and best Hives made, Danzenbaker Hives. Hives for Slotted Sections, and a very low-priced Hive, and carloads of other goods, all in our warehouse ready to ship.

THE A. I. ROOT COMPANY,
H. G. ACKLIN, Manager.
17Atf 1024 Mississippi Street, St. Paul, Minn.

Please mention Bee Journal when writing.

Italian Bees For Sale !!

We have arranged with a large bee-keeper in Lee County, Ill., (about 100 miles west of Chicago), to fill our orders for Italian Bees at the following prices there, which include a good Queen with each colony:

8 L. frames of bees in light shipping-case, $3.75
5 at $3.50 each.
8 L. frames of bees in dovetailed hive, $4.25.
5 at $4.00 each.

Prompt shipment after May 1, and safe arrival and satisfaction guaranteed. Address

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

Two Special Offers.

As explained in former ads., publishers can afford to put forth extra efforts in securing *new* subscribers; as the majority remain, once they become subscribers to a *good* journal. It is from this point of view that I make the following offers:

Offer No. 1.

To any one not a subscriber to the Review who will send me $3.00, I will send the Review for 1898 and 1,000 strictly firstclass, snow-white one-piece Sections. After accepting this offer if any one wishes to buy more sections, I will furnish them at the following prices: 1,000, $2.75; 2,000 for $5.25; 3,000 for $7.50; 5,000 for $12.00. Sections will be shipt from any of the following points: Flint, Mich.; Chicago, Ill.; Medina, O.; Jamestown, N.Y.; Higginsville, Mo., or Omaha, Neb.

Offer No. 2.

To any one not a subscriber to the Review who will send me $1.50, I will send the Review one year and a fine, TESTED Italian Queen. Purchasers may have either the bright, golden strain, or the dark leather-colored reared from imported mothers. After accepting this offer, if any one wishes more queens, they will be furnisht at the following prices: Single queen, 90 cts.; 3 for $2.65; 6 for $5.00; 12 or more at 75c each. Orders will be filled in rotation, and safe arrival guaranteed.

Unless otherwise ordered subscriptions will begin with the January issue; and the December, 1897, number will also be sent, free.

If you are not acquainted with the Review, and wish to see it before subscribing, send 10 cents for three late but different issues, and the 10 cents may apply on any subscription sent in during 1898. W. Z. HUTCHINSON,
FLINT, MICH.

Listen! Take my Advice and Buy Your Bee-Supplies of August Weiss !

FINE FOUNDATION AND TONS OF IT. Working Wax into Foundation a Specialty.

I DEFY competition in Foundation

Millions of Sections — Polisht on both Sides !!

SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalogue and be your own judge. Wax wanted at 26 cents cash, or 28 cents in trade, delivered to me.

AUGUST WEISS, Hortonville, Wisconsin.

hundreds of acres of it in reach of my apiary.

While writing this letter my thoughts go back to one year ago this morning. When I arose there was just 4 feet of water where I am now writing, and over one-half of my bee-hives, and all was floating over the yard.

Let the American Bee Journal come along; I got more information from one copy awhile ago than its cost for five years. I would not keep 5 colonies of bees and do without the Bee Journal. I ofttimes think of an old man when I was keeping bees in Michigan, who kept a few bees, and would often visit me. I askt him to send for the American Bee Journal. He said, "What for? I know more about bees than the man that prints that book." Shortly after that he came to me and said his bees were doing nothing, and dwindling down. I told him I would go down and look at them. I went, and 2 colonies were queenless. He said, "What can I do to save them?" My answer was to give me one dollar and I would send for the American Bee Journal. He replied, "I will." So he did, and I sent for the Bee Journal for him, and also fixt up his bees for him. Less than six months afterward I was at his place, and he said to me: "Siple, I did not think the men up at Chicago knew so much about bees. I would not be without that little book for five dollars."

Well, I have two more just like him near me, who keep bees. They are after me to fix up their bees, often when I am busy at home. I have tried to get them to take the American Bee Journal, but they are like that Michigan man—they know it all!

I am working three apiaries besides my own this season, so I shall have a busy summer. I get 10 cents per gallon to extract their honey, and board. Last summer I left home at sunrise and walkt 6 miles, extracted 141 gallons, and quit at 6 o'clock and walkt home that night. I had a colored boy to blow the smoker. How is that for a man over 50? One of the apiaries I am working is 6 miles north. I have 118 colonies. The other is 5 miles south, with 106 colonies. The other 14 miles on the railroad south, so I will not have much time to play this summer. J. H. SIPLE.

Bolivar Co., Miss., March 30.

A Few Notes and Comments.

I wintered 10 colonies of bees on the summer stands without loss. They have been carrying in pollen for the last five days. To-day it is cold and snowing some.

I can hardly agree with Mr. Stone (see page 163) that the bees, not the queen, order the walk-out. My experience has taught me differently, for I have seen the queen run around at the entrance and then swarm out. I think the queen is the "boss." I have kept bees for eight years, and there is more to learn about them than I thought.

I have drones flying on warm days. I never before saw drones flying before June.

I have a neighbor across the road who bought a colony of bees, and he said they were pure Italians. I went to see his bees, and to my surprise they were hybrids. I told him that bees are a deep study, and he had lots to learn as well as myself.

Last year was a good honey-year. Prospects are good so far, and white clover is looking fine. Honey is cheap. Comb honey sells out of the city of Toledo at 10 and 11 cents a pound.

I was greatly surprised when I read that Dr. Besse lost his sweet-clover lawsuit. I was hoping that the Doctor would get justice. What is this world coming to, if a person can't plant what is valuable to him. W. M. DANIELS.

Wood Co., Ohio, March 23.

Wintering—Alley Trap, Etc.

Bees did fairly well here in Vermont last year, tho it was a wet and rainy season. I have been in the habit of contracting the bee-space entrance from six to eight inches in cold weather, on the summer stands, packt with leaves or straw, and the super of sawdust on top of the frames. I find no bad results so far. I look at it as bad economy for one to leave the doors open the same as in summer, tho he had a house full of coal and provisions plenty. Part of the hives I put into the cellar to winter, using a sawdust super on top, and a two-inch narrow frame between the hive-body and the bottom-board. I find very little difference in time of bees building up at swarming time, in those taken from the cellar or those left on the summer stands.

I have valued the Alley queen and drone trap very highly, tho I have had bees disappear that never returned. The traps need attention early mornings, to rid them of the drones, kept clear from getting clogged. I put them on swarms newly hived, and part of the working season leaving the return passage clear for return of queen if she enters the trap. I have this last year, as a consequence, one dozen empty hives void of bees, but with frames fairly filled with honey well preserved.

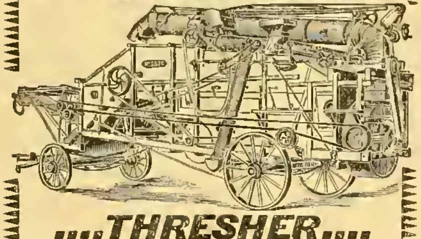
I have an inquiry as to what is the best plan to pursue, whether to hive swarms on full combs, or to use part foundation in the center of full combs. Would they rather start queen-cells and move out?

I have not had very much experimental practice in this line. I have only been in the apiary business a few years. I enjoy being with the bees, and am interested in the "old reliable" American Bee Journal. May its banner forever wave.

W. F. CARRIER.

Bennington Co., Vt., Jan. 24.

THE RUMELY



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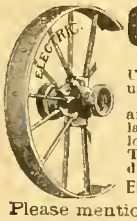

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J. F. MICHAEL, Greenville, Ohio.

11Dtf Please mention the Bee Journal.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, April 20.—Fancy white comb honey would bring 11 cents, but there is none here; other good grades of white at 9 to 10c.; dark and amber, 7 to 8c. Extracted, white, 5 to 6c.; ambers, 4½ to 5c.; dark and off grades, 4c., with exception of dark candied and amber grades. This market is bare of comb, and while prices have been low the quantity sold locally has been greater than last season. Beeswax scarce, and sells at 27c. for average lots. R. A. BURNETT & CO.

Kansas City, April 20.—Fancy white, 9 to 10c; No. 1, white, 9c; amber, 8 to 9c. Extracted, white, 5 to 5½c; amber, 5c; dark, 3½ to 4c. Beeswax, 20 to 25c.

Comb honey is selling fairly well, but prices are low; considerable shows signs of candying, which makes dealers anxious sellers.

C. C. CLEMONS & CO.

Cincinnati, April 19.—Demand fair for extracted, at 3½ to 6c. according to quality. Demand for comb is slow at 10 to 13c. for best white. Beeswax in good demand at 20 to 25c. for good to choice ye low.

CHAS. F. MUTH & SON.

Boston, April 14.—Fancy No. 1, in cartons, 13c.; in glass-front cases, 12c.; A No. 1, 11c.; No. 1, 9 to 10c.; No. 2, 9c. Extracted, white 6 to 7c.; light amber, 5 to 6c. Beeswax is scarce at 26c.

Our market on comb and extracted honey has kept active at old prices, and as a result the stock is well cleaned up. There is very little call for anything but white in this market. BLAKE, SCOTT & LEE.

Cleveland, April 14.—Fancy white, 12 to 12½c.; No. 1, 11c.; No. 1 amber, 9 to 10c.; buckwheat, 8c. Extracted, white, 6c.; amber, 4 to 5c. A. B. WILLIAMS & CO.

San Francisco, April 6.—White comb, 8½ to 10c; amber, 6½ to 7½c. Extracted, white, 5½c.; light amber, 4¾ to 5¼c. Beeswax, 24 to 27c

A ship sailing this week for Hamburg took 316 cases. Sellers are not nearly so numerous as early in the season, and are inclined to be quite exacting at present in the matter of prices. Market is strong for comb and extracted, with supplies of latter light and stocks of comb showing steady decrease. The firmness is based mainly on the poor prospects for coming crop.

Detroit, March 22.—Fancy white is lower and now quoted at 11c. No. 1, 9@10c; fancy dark, 7@8c; No. 1 dark, 6@7c. Extracted, white, 5@6c; dark, 4@5c. Beeswax in good demand at 26@27c.

There is considerable dark and undesirable honey on commission now, and some of it will be carried over to another season.

M. H. HUNT.

Minneapolis, Mar 18.—Honey much more encouraging. Fancy white clover comb is selling here now at 10½@11½c. Not advisable to ship darker than amber. Extracted fancy white clover, 5½@6c; amber, 5c; dark, 4@4½c.

Outlook for honey much more encouraging.

S. H. HALL & CO.

Indianapolis, March 24.—Fancy white, 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand. WALTER S. POUDER.

Milwaukee, March 8.—Fancy, 11 to 12c.; A No. 1, 10 to 11c.; No. 1, 10 to 10½c.; No. 2, 9 to 10c.; amber and dark, 7 to 8c. Extracted, in barrels, kegs and cans, white, 5 to 6c.; dark, 4½ to 5c. Beeswax, 25 to 27c.

We are able to report an improved demand for fancy honey during the past few days, while the medium grades have also sold better, yet the surest sale is on the BEST. The supply continues equal to the demand, but the fancy grades are not in as good supply as the low and medium, which goes to prove that the fancy sells best—and the values better

A. V. BISHOP & CO.

Buffalo, March 11.—There is a good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

DR. PEIRO,

CENTRAL MUSIC HALL, CHICAGO.

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17A8t Mrs. A. A. Simpson, Swarts, Pa.

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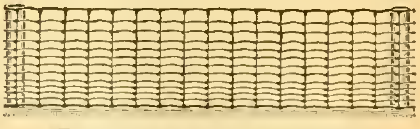

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Five Colonies.....	25 00
Ten Colonies......	45 00
1 untested queen.	1 00
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LANGSTROTH ON THE HONEY-BEE, Revised.
The Classic in Bee-Culture—Price, $1.25, by mail.

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38th Year. CHICAGO, ILL., MAY 5, 1898. No. 18.

CONTRIBUTED ARTICLES

Spring Management of Bees—Good Advice.

BY G. M. DOOLITTLE.

A correspondent who says he is a reader of the American Bee Journal, requests that I tell how I manage bees in the spring from the time they are put from the cellar till swarming-time arrives, which I will endeavor to do.

As I now feel in the matter there is only one thing which is really essential to look after as soon as the bees are put from the cellar, or in early spring, no matter which way the bees have been wintered; and that is to see that they have plenty of honey to last them till pollen becomes plenty, or steady warm weather arrives.

This part is something that can be done on any cool morning after a day or two of cool or cold weather, when the bees will be clustered compactly together, thus drawing off from much of the comb surface, so that you can peer down the vacant spaces between the combs, outside the cluster of bees. To do this, carefully remove the cover to the hive, then as carefully roll back the quilt or cloth covering over the combs, beginning at the end or side the farthest from the entrance, as the cluster is generally formed near the entrance, rather than next the back side of the hive. If you have been careful you can roll the covering back to the cluster of bees without arousing them but little, if any.

Now look down between the combs, noting the sealed honey they have, and if plenty is seen along the top-bars of the frames that colony is safe during the next month to come. If little or none is seen the hive should be markt in some way, and the very first day (when the bees can fly) should be embraced to feed all such colonies. To do this understandingly the frames should be taken out and examined to see how much honey they really do have, and enough be fed so that each colony has at least 10 pounds.

Sometimes we find colonies which do not show any honey along the top-bars of the frames on account of the bees carrying the honey from this portion of the hive down into the cluster during the winter, altho very few colonies do like this, in which case they may have honey lower down in the combs. Where this is the case an examination of the combs by lifting from the hive will reveal the same. When looking at the bees during the cool morning it is well to note how many spaces between the combs the bees occupy, and set it down on a piece of section, which is to be left on the hive, so that we may know something of what will be needed for this colony when we commence active operations later on. I write on the section piece thus:

Supposing it to be April 5, or the fourth month and fifth day of the year 1898—'98, 4-5, H. P.; S. 6—which tells me at any time I may look at this piece of section thereafter, that on April 5, 1898, that hive contained plenty of honey and a cluster of bees large enough to occupy six spaces between the combs; or, in other words, it says that the colony was A No. 1 for that time of the year, and needed no further attention until the time for general work among the bees.

The markings on the different pieces of sections are varied to suit what is found in each hive, and are left on the hives till both sides of the section are completely covered over with this "brief" regarding the colony it contains. From this piece of section I can tell regarding the "standing" of many colonies of bees as far back as four years, and it is a great help in deciding which queens are best for further breeding purposes.

In deciding as to the amount of honey each colony should have it is well to remember that bees consume much more honey at this time than they do during fall and winter, and that it is better to err on the side of too much honey than on the other, which will mean a retrenchment of brood-rearing a little later on.

Having made sure that all have honey enough there is no further need of molesting the bees till the weather becomes generally warm enough for them to work in the fields or trees nearly every day gathering pollen and honey. In fact, I now believe that further disturbance is positively detrimental, inasmuch as it often causes the loss of bees and brood by breaking the cracks open about the top of the hive so as to let the warmth out, as well as a greater consumption of honey, without any proportionate gain to the colony.

Francis Danzenbaker—See page 276.

Six weeks is a sufficient time to build up a fair colony to one sufficiently strong to store honey to the best advantage, and as the clover usually begins to yield honey here about June 20, from May 1st to the 10th is soon enough to begin working for brood, and it is better not to touch them even now, unless the weather is warm enough so that the mercury reaches from 60° to 75° during the middle of the day. With a temperature of less than 60° above zero, brood is liable to be more or less injured in handling, from which a positive loss is made rather than the intended gain. If the weather is fine about this time, the internal condition of each colony is inspected by taking the frames out of the hives, cleaning the dead bees off the bottom-boards should any remain in the bottom corners of the hives, seeing that each colony has a queen, and that there is honey enough to last at least two weeks.

A good queen is of no more importance at this time than is this two or three weeks of honey, which now means from six to ten pounds, for if the bees do not have enough stores so they need not feel it necessary to economize, a good queen and all else will not make up the lack, for bees will not rear much brood if they are obliged to economize for fear of starvation in the immediate future.

After seeing that all have a good queen and sufficient stores they are now left till willow and hard maple bloom, when, if the weather is favorable, the combs in the brood-nest are reverst by putting those frames having the least brood in them in the center of the cluster, and those having the most at the outside, thus causing the queen to fill these center combs with eggs as fully as were those which were in the center before, or more so, while the brood in those now on the outside is not allowed to decrease at all. In this way a great gain is made, as I have proven by leaving rows of hives in the apiary untoucht, and by treating others as here given. Understand I am speaking of the frames which have brood in them, or what is termed the "brood-nest," and not the brood-chamber. Only the frames having brood in them are reverst—the rest are left untoucht.

In about two weeks the brood-nest is reverst again, at which time all but the very weakest colonies will have brood in all, or all but one or two combs, after which there is no gain made in handling the frames, unless you have some special object in view, such as taking away the queen, changing brood from the stronger to the weaker colonies, or something of that sort. In two or three days after the last reversing is done the colonies are ready for the sections, if there is any honey coming in from the fields. If not, it is better to wait till the hives become a little more populous; yet, if we wait too long the colony is apt to contract the swarming fever before they go to work in the sections, in which case our prospect for a large yield of honey is lessened.

As a rule, the fewer swarms that issue the greater the yield of honey; yet where bees get the swarming fever, as they often will in spite of all precautions, better results will then be obtained to let them have their own way, using the Heddon plan of preventing after-swarms, or some other equally good plan, than to try to keep these "fractious" bees all in the old hive. Onondaga Co., N. Y.

Do Bees Steal Eggs as Well as Honey?

BY "COMMON-SENSE BEE-KEEPING."

Yes, they do, if they are prest by necessity, and I know it, and this is how I proved it:

I had a few hives built so that after the swarm should issue I could make nuclei of the old hive without taking the parts away from the old stand, so that notwithstanding the separation the brood-nest would remain just as compact as before to retain the heat of the whole body for a greater protection against the fluctuations of temperature between cold nights and hot days. The entrances and approaches thereto were also duly separated so that the several nuclei could use the same alighting-board. At first the approaches were not divided by sufficient means to prevent the bees from seeing each other in coming and going. And when it was time for the young queens to begin to lay, I opened up their domiciles for examination.

The first queen to the right had begun laying nicely, having quite a stock of larvæ and eggs, but the nucleus next to her showed no signs of a queen, tho her empty cell was there from which she had emerged, and all the brood was hatcht except a few scattering cells. I suspected at once that the young queen had mist her way on returning home after mating, and on entering the wrong place had been dualized by her sister. But I said possibly she hatcht late, and I can't find her among the bees, so I will give her a week or 10 days to show up signs of business.

When I opened them again the colony was weaker, as a matter of course, with less honey and nearly all of their combs empty. But as strange as it may seem, there on one comb hung five beautiful queen-cells all sealed over, besides about 40 worker-cells capt over, where there were empty cells at my last call.

Now if they had had a fresh young queen she would not have suspended work on the first hour of her fertility, which the condition of things would indicate if they hadn't borrowed the eggs. Again, if they had had a fertile young queen in their weak condition, they would have taken the first eggs she laid to build queen-cells with and fix for swarming.

The only solution I could reach that seemed reasonable was, that they had gone around the partition to the next nucleus on either hand, and had helpt themselves to eggs for a starting in their misfortune of being queenless.

If any one has a more reasonable solution I should be glad to hear it.

But the sublimest thing that I see in this whole case is the proof that bees have power to reason fully up to the necessities of their case. So they are not altogether creatures of instinct. See? Pennsylvania.

How to Prevent After-Swarming.

BY C. P. DADANT.

I have received the following letter, which I will answer in the American Bee Journal:

> I would like a little advice about keeping my bees from swarming after the first swarm leaves the hive. In our location they swarm too much. CARL ANDREE.
> Cuyahoga Co., Ohio.

It is very difficult, if not impossible, to keep the bees from swarming when they are in small hives and crowded for room for the queen to lay. But there are methods by which the tendency to swarm may be increast, and others by which it is alleviated to a great extent. Any impediment to the free access to all parts of the hives, not only for the passage of the bees, but for a free circulation of air, will tend to make them uncomfortable and cause them to get the swarming impulse. The fact that when they get this desire to swarm it is almost impossible to change it is clearly shown by the appellation of this condition by old apiarists as "the swarming fever."

Separators, drone-traps, queen-excluders, and the thousand and one contrivances that have been praised from time to time by enthusiasts, but which hinder or confine the bees, are sure to help enhance the swarming fever. A much-divided super cut up into small sections has a tendency in that direction. It is for this reason that we have always been in favor, with Oliver Foster and other noted producers, of sections that were open so as to allow the bees to pass freely from one to another. The section open three ways has proven a step in the right direction; as it can either be used as closed or open top, and permits of the passage of the bee from one to another. With closed sections the bees have to descend to the lower apartment, or rather to the space above it in order to pass from one super to another. I can only compare this to a house in which the up-stairs rooms would have no door of communication with each other, but would have each a stairway communicating with the lower apartment—a rather sorry arrangement, indeed.

Your question is in regard to preventing all swarms after the first swarm. There is only one method that I know of to accomplish this result, and it is not of my own invention, but I read it years ago in the work of Hamet, a French writer on bees of "box-hive" fame, and this method has proven quite successful. I gave it in one of the bee-papers several years ago, and a number of apiarists reported favorably upon it, after having given it a thorough trial. It consists in hiving the swarm and returning it to the parent hive about 48 hours after swarming. As the reader will see, it does not prevent swarming, but simply does away with the swarm and the inconvenience of having too great a number of weakened colonies, and the result is the same (excepting the labor involved) as if the colony had not swarmed.

This method has been tried on the first swarm. On this it is not very successful, for it leaves the hives with the same strength as it originally possest, and otherwise unchanged conditions. But when practiced on the second, or succeeding swarms, it has full effect in most instances.

The effect of this measure is easily reasoned out. When the colony has cast a large swarm, as the first usually is, the following issues are only a result of the feverish or excited condition of the bees, and of the fact that a number of young queens are hatcht, or about to. The second, if large, usually leaves the hive in a depopulated condition, and the fever abates at once. The remaining bees either destroy, or allow to be destroyed, by personal combat all the young queens that might cause another issue. If the swarm is returned in about 48 hours the young queen that comes with it, strong and vigorous as she is, being the oldest of the new queens, readily overpowers the remaining one, and at once begins her regular duties. This throws the condition of the colony back into the normal state, and honey-gathering is no longer interrupted unless a protracted honey crop of great proportions, or the neglect of the apiarist to give room should cause another spell of feverish excitement later. Such conditions are of unusual occurrence in this part of the United States.

When hiving a second swarm with the purpose of returning it to the hive, it may be temporarily put into any kind of a box, a nail-keg, or in fact any vessel that will hold them for the short time they are expected to remain. As a matter of course it is well to look to the comfort of the bees otherwise to give them plenty of room and plenty of air and shade.

Another method to prevent after-swarms consists in removing the hive from its stand at the issue of the first swarm, and place the swarm in its stead. This removes all the old bees, and throws the entire working-force on the first swarm, which then becomes the main colony, and may be lookt to for the largest yield of honey.

Hancock Co., Ill.

Producing Only the Very Best Honey.

BY W. W. M'NEAL.

The first honey I ever ate, that I remember distinctly, was taken from a "cap" worn by one of the old box-hives. I tell you I thought that honey tasted good; and I believe to this day it *was* good. I have many times since eaten of honey that lookt better, but somehow the real delightfulness of my first experience has never been repeated. When a colony of bees in a great big box-hive climbs up into the hollow cap and builds comb and stores honey there, it is of a kind that "tastes like more." The comb is the real product of the bee, and the honey the real juice of the flower; and when left on the hive all summer—say, "haint" it then "real honey?"

If all the honey sold were so treated there would not be so much talk of a weakened demand for honey. When the bees are urged to hasten the completion of their work by the giving of full sheets of foundation or ready-drawn comb, the honey is not retained in the honey-sac of the younger bees as long as it should be, but is stored in the comb and capt prematurely. Such honey, if removed from the hive immediately, is almost sure to deteriorate unless special care is bestowed upon it. Comb honey should be so thick and ripe that when cut it is waxy, stringy-like. A single pound of it, even, is almost sure then to bring your customer back for more. When honey is mentioned in his presence he is almost sure to say the right word at the right time, and so a demand for honey is created. But if through carelessness on the part of the producer the honey failed to give satisfaction, how different the result. Not only is the customer himself lost, but everywhere he goes he hinders the sale of honey.

This state of things is more easily brought about with extracted honey, which is seldom left on the hive till it is really fit to eat. The thin, semi-ripened honey soon takes on a sour, rancid smell, which of itself is enough to drive any one to an utter dislike for honey. A poor grade of extracted honey is not so good as newly-made sorghum molasses that sells for a quarter a gallon.

But the trouble in the honey market is not wholly due to faulty methods in the production of honey. The unceasing cry of bee-keepers to use cane-sugar in the apiary has manifested its withering power. There is a boldness in this direction that bids destruction to the honey-business. Glucose, with all its contaminating hatefulness, has done no more to hedge in the sales of pure honey than has the use of cane-sugar. It is a fact that those who are unacquainted with honey believe pure honey ought always to remain a liquid. If the agricultural journals were read only by honey-producers the trouble would not be nearly so great; but honey consumers note the fact that sugar is fed to bees, and so when they are presented with a few pounds of the genuine article of honey, and the same sugars on their hands—which it is sure to do—there is then need of a right, real gilt-edged piece of logic to convince them that it is not of the sugar-honey kind they read about. No one who feeds sugar to his bees can long hold the confidence of those about him. The people know of but one purpose for which sugar is fed to bees, and that is to be "made" into *pure* honey. They naturally hesitate to pay living or honey prices for honey itself, so the home trade suffers, and the honey is thrown upon a distant market.

If it is wrong to use glucose it is also wrong to use cane-sugar; and it is surely a mistake to sound it through the length and breadth of the land that either is used with honey. Just so long as bee-keepers continue to do this; just so long as they continue to put up and offer for sale unripe honey, will honey go begging a buyer.

Large hives or brood-chambers are the surest and best way of driving the sugar-barrel from the apiary, and the cutting down of expenses in general. There is no more trouble for me to get a strong colony of bees into the supers over a large and deep frame than it is to get a weaker one there over the small and shallow frame. The colonies in small hives are never, it seems, able to care for themselves, but always require a lot of coddling, which to me has few charms.

In retailing extracted honey I prefer the common tin pails, such as are used in almost every home. I do not approve of selling in very large quantities to new customers, for they are very apt to put the honey in some place where it will spoil before used up. Of course they then lose their taste for it, besides refusing to buy a fresh lot so long as there is any of the old left.

I find the poor, the children of the poor, to be excellent consumers of honey when given a chance to eat it. Bread and molasses forms a large part of their bill of fare, so they well know how to sop. But if the poor are to be made the receivers of the honey crop, they should be given the very best for their hard-earned money. I do not see how comb honey can be brought down to a price within their reach without selling it at a certain loss to the producer. Then if extracted honey only enters this broad field in competition with the many kinds of cheap table-syrups, how necessary it is that every means known to the fraternity for sustaining the reputation of liquid honey be called into service.

Unfortunately the recent leaflet by our good friend Dr. C. C. Miller, is telling a good many people (page 6, near the bottom) "it is a comfort to know that, when one buys comb honey, he may know without question he is getting the genuine article." The canker *should* receive prompt and vigorous attention, but I cannot see that the public ought to be told we have it to deal with.

Let all those who produce honey and have the love of the pursuit at heart, see to it that none but the *very choicest* of honey leaves their apiary for *any* market, and a good deal of the suspicion and prejudice now existing will dwindle away.

Those who believe there is or can be an overproduction of honey, need only to visit the homes of the poor and there see the hungry-looking little tots who would almost give their toes for all the good honey they could eat, to relieve their minds of any such delusion. The question with them, then, I think, would be, is it *possible* for there to be an overproduction of *honey?*

Scioto Co., Ohio.

Again a Defense of the Bee-Space.

BY W. C. GATHRIGHT.

I would not have offered my criticism on the article by the "Common-Sense Bee-Keeper" had he not made these claims, *i. e.*, that no bee-keeper uses the bee-space for any other reason than that it is handy; and that the bee-space is the cause of all bee-diseases.

By the way, let me say that an attack is generally replied to with the same spirit in which it is given. Mr. "Common-Sense Bee-Keeper" made a voluntary attack on the bee-space in a *very* aggressive style, and should not complain if replies are in somewhat the same spirit.

On page 98, Mr. "Common-Sense Bee-Keeper" thinks that I am much mistaken in saying that the bee-space was Mr. Langstroth's most important part of the movable-frame system. The bee-space was not only a convenience but a necessity. I saw frames in a bee-hive long before I ever saw or heard of a Langstroth hive, but the frames I saw were worthless on account of not having the bee-space. The bees had fastened them securely to the sides of the hive, and the owner had to tear them to pieces to get them out.

I made the assertion that it was a good thing for the air to escape from the cluster to the adjoining spaces, for it allows pure air to take its place. To this my friend takes exception and says: "If this be true, then wire-screen in the place of the regular cover and bottom would be better." This is in exact accord with the idea that if a spoonful of medicine is good for the patient, a cupful would be better. He is simply going to the other extreme from his non-bee-space idea.

Bees need pure air to breathe, but it does not require a strong draft of air through the hive to supply them. Our friend must certainly know that air once breathed is poison. There should be a *gradual* displacement of the warm air which they have breathed. The bee-space allows this displacement to take place just exactly as it should.

In support of the above theory, I call attention to Dr. E. Gallup's article, on page 4. He tells of a hive that was crackt open from top to bottom, the crack being fully ¾ of an inch wide. He says he felt sure that colony would freeze, but "that colony wintered the best in the lot. My bees that I kept warm nearly all died that winter." This was in Canada. I have read of a dozen or more instances similar to this.

My own experience with bee-diseases was in Mississippi some years ago. In that wet climate we had to contend with all the diseases which bees are liable to. From what I could learn it was nearly as difficult to winter bees there and have them come through in *good condition* as it is in the North. The reason for this perhaps was the climate, which was very changeable and damp. I give here my opinion that disease is caused wholly and entirely from *dampness*, *foul air*, and *bad food.*

Here in New Mexico disease is unknown. The reason is plain. The air is so extremely dry that should there be any moisture accumulate during a cold night it dries out thoroughly during the day, and from the same cause a dry atmosphere. Our honey is thoroughly ripened.

Now I am not going to try to tell the bee-keepers in the North how to winter bees, but if I were keeping bees there I would fix them up for winter this way:

Stand the Langstroth frames on end, or use some other plan to provide plenty of stores *above the cluster*. On top of the hive (preferably on the outside) put on some protection to prevent moisture accumulating over the cluster. Give the proper ventilation, and with a good quality of stores I would not be uneasy as to the outcome. I believe this plan is the correct one, for the following reasons:

Bees never freeze. They die only from starvation or disease. In long, severe winters bees starve with plenty of honey in the hive. The cause of this is, the frames are shallow, and they consume the honey above them, but cannot reach the sides where there are full frames of honey, the cluster being able to move upwards but not sidewise on account of the cold.

With plenty of fuel (honey) right in their midst they can manufacture heat just as needed, and that heat is *inside the cluster*, and in a colony in a proper condition the bees are constantly changing places, those inside coming out to get fresh air, and those outside going to the center for food and warmth.

Dona Ana Co., New Mex.

BIOGRAPHICAL NOTES.

MR. FRANCIS DANZENBAKER.

The subject of this sketch was born Jan. 8, 1837, near Bridgeton, N. J., so he is now in his 62nd year. His great grandfather came from Germany; his grandfather spoke German as well as English, and, before "Francis" was born, owned over 300 colonies of bees. His father also kept bees, and so he has always been with bees and bee-work as it were by inheritance.

Mr. Danzenbaker's mother's injunction to her children always was, "What is worth doing at all is worth doing well." It has been his motto, and he has eagerly studied and aimed to have the best possible appliances for bees. This has brought him to where he may feel that he is well at the front in the production of comb honey.

Mr. D. has several patents on hives, one issued March 8, 1898, and one now pending; also one for a paper carton for comb honey, that he considers the most valuable thing that he will have contributed to the art of bee-keeping.

Mr. Danzenbaker was the first to lead in the use of the lock-corner hive, or so-called "dovetailed" hive, and has many features as important improvements of his that are now made by The A. I. Root Co.

Mr. D. may be clast with all of his ancestors for four generations, who were farmer bee-keepers.

We had the pleasure of making Mr. Danzenbaker's acquaintance at the Buffalo convention last August, where he took a very active part in all that came before that meeting.

⁂

The Wood Binder for holding a year's numbers of American Bee Journal, we propose to mail, postpaid, to every subscriber who sends to us 20 cents. It is a very simple arrangement. Full printed directions accompany each Binder. Every reader should get it, and preserve the copies of the Bee Journal as fast as they are received. They are invaluable for reference, and at the low price of the Binder you can afford to get it yearly.

CONVENTION PROCEEDINGS

Proceedings of the Colorado State Convention.

REPORTED BY F. L. THOMPSON.

[Continued from page 262.]

A desultory discussion followed, of which a few remarks are here given:

Mr. Dudley (of Colorado)—I was troubled some years ago with a persistent ailment, not well understood, which was perhaps mild erysipelas. I found the homœopathists had a remedy which helpt me. But in working with the bees I got stung at times, and found that I did not have to go for medicine. I have not been troubled since.

Mr. Adams—For ants I use equal parts of kerosene and coal-tar. Five drops of this clean out the biggest ant-hill. It is equally effectual with all kinds. I drop it on the hill or around the hives. It does not harm the bees, as I found by accidentally spilling some in a hive.

Mr. Varian—In the case of the small black ants, one has to find several holes. They get in the house.

Mr. Whipple—Common mint strewn in the honey-house will scatter them in 24 hours.

HANDLING CANDIED HONEY IN FRAMES.

QUES.—In the case of honey going over from year to year, what method do the members follow to prevent the granulation probable, and cause the greatest increase while doing so?

Mr. Varian—My neighbors lost a quantity of bees last year by having honey granulated in the hives, when the bees had no chance to get water. The honey should be replaced or workt over.

H. Rauchfuss—Those bees were out of condition. No candied honey will stay in the hive which a normal colony will not remove in the summer. I believe the bees died from some other cause. Likely they got wet.

Mr. Thompson—I have read in a foreign journal that one bee-keeper placed frames of granulated sealed combs in water just hot enough to liquefy the honey without melting the combs. I suppose the water buoys up the combs enough so they do not fall out of the frames.

Mr. Devinney—It won't work.

H, Rauchfuss—I have uncapt combs and sprinkled them with water from a Mason jar with a perforated cap It has to be done several times. The main trouble is, that the bees are not strong enough in the spring.

Pres. Aikin—I have had a good many colonies that either starved or petered out. Their hives were heavy, without a pound of liquid honey in them. My remedy would be to use a brood-chamber large enough to hold about twice as much as the colonies want. In spring the colonies could pick out enough to get along. If the remainder is sealed, and the colony gets strong, it becomes soft enough for the bees to get out. Then perhaps have a double bottom-board, the upper part being of coarse wire-cloth, so that when the bees dig the grains out of the cells they will fall through out of reach of the bees. I have not tried it, and it would involve some little expense, but I think it feasible. Then the honey can be liquefied in the solar extractor. A solar for rendering wax will save a large amount of honey. You don't know how much honey and wax you lose by a plain bottom.

QUEEN-CELLS IN WIRE PROTECTORS.

QUES.—At what age will it do to put queen-cells in wire protectors in order to insure them to hatch?

H. Rauchfuss—The age does not make so much difference as the handling. If the queen-cells are capt they will hatch if they are not injured. They are not apt to hatch if handled too young. So it is best to wait until one day before hatching, using some artificial means of procuring cells, so as to know their age. Sometimes the bees thin the wax on the end of the cell shortly before it hatches, but this sign is not reliable.

EFFECT OF SMELTER SMOKE ON BEES.

QUES.—Does smelter smoke injure bees?

F. Rauchfuss—Most assuredly.

Mr. Dudley (of Utah)—For the last 10 years bees could not be reared in a space of about five by six miles near Salt Lake. The hay in that region poisons cattle.

H. Rauchfuss—Some horses died from eating grass near the smelters here. I believe our loss in bees was caused that way; not directly by the smoke, but because moisture absorbed poison from it and deposited it on the blossoms. It is just when we have a moist spring. It kills all ages, and only the weak and queenless colonies get through.

HONEY AS A FOOD AND MEDICINE.

Ques.—Is honey recommended as a healthy food? and, if so, for any particular disease?

Mr. Adams—For all pulmonary diseases and all diseases of nerves.

Mr. Rhodes—Some of our friends who had Bright's disease could eat no sweet but honey. It was also good for stomach troubles, because honey is already partially digested. This ought be embodied in advertisements of honey.

Pres. Aikin—I have been troubled for years with an acid condition of the stomach. Most sweets that I eat start fermentation. But I can eat honey when I could not eat sugar.

Pres. Aikin was askt to explain his new hive, which he did as follows:

Hive Explanation by the President.

I shall use the fence or cleated separator in the super with plain sections. With this separator the bees do not lengthen those cells which are above and below the ordinary separator. Never make the cleat the full thickness of a bee-space, ¼ inch. I think ⅛ inch is thick enough, tho the Root Co. are making them 2/12 of an inch.

I have been favorably imprest with the Heddon principles. I don't think a shallow frame is any better. I don't think it is quite as good as a deep one. No general size of hive is better, all things considered, than that which takes the American frame, which is square. Its defect is, it has not enough surface on which to place the surplus receptacle. I have used it almost constantly for 20 years. I cannot say positively, but I think that bees will build up faster in continuous large frames. But we must sometimes sacrifice advantages to convenience.

My frame, as you see it here, is of the Quinby style, 5 inches deep and 16 inches long. Hitherto we have always adapted the surplus apartment to the brood-chamber. I believe in adapting the brood-chamber to the surplus fixtures. I believe in tall sections. So my frame is as deep as one section, and as long as four sections. The brood-chamber is 16 inches long and 15 inches wide, making a large super surface (32 sections). It consists of two or more shallow stories, or hive sections. When three sections are used it approaches the cube, being 15¾ inches deep, making an almost ideal form of hive.

It is easiest to handle bees when a little honey is coming in. Eight days before the main flow I go around and put an excluder between the sections or apartments of each hive. On the eighth day (full 8 days) every cell of the brood in the section from which the queen is excluded is sealed. It takes about two minutes to find which part of the queen is in. The part with the queen is then set on a new stand, after removing the queen-cells. The other part is hopelessly queenless. I then either immediately slip in a cell in a protector, or wait not more than two days for the cell, or put in a virgin queen just hatcht (not a laying queen, or they may swarm). Then all the brood hatches by the time the queen is ready to lay. The colony is in the same condition as a colony which has swarmed. If increase is not wanted, I set the parts together after the honey-flow and let the queens fight it out. By this method but few colonies become queenless.

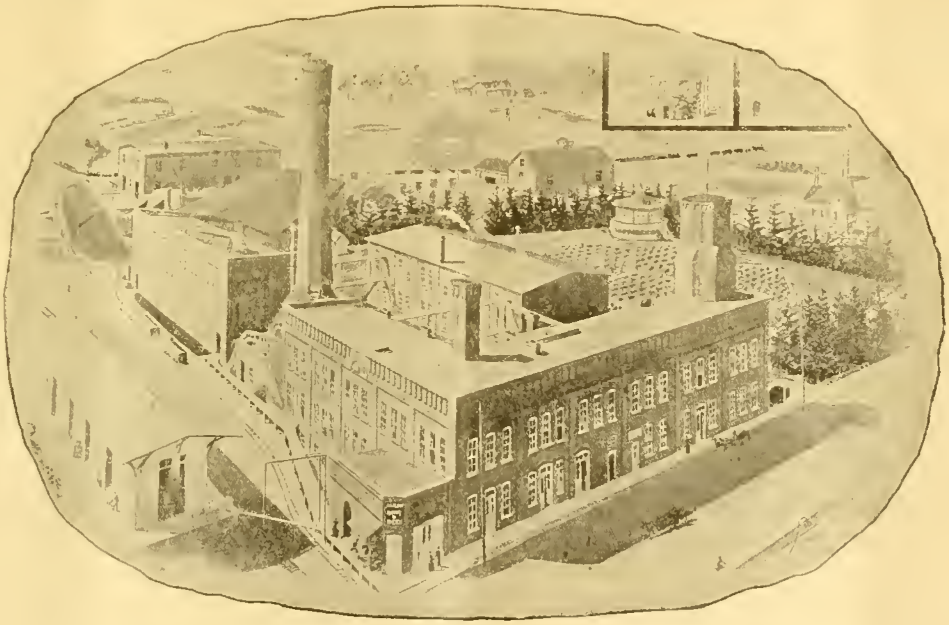
The frames are spaced 1 and 4/12 inches. Propolis will increase this a little. I know from practice that 1 4/12 inches will work all right, if the combs are true, and do away with burr-combs. Burr-combs have two chief causes, improper spacing and a crowded condition; they are caused also by the sudden stopping of the flow while wax is being secreted. (Wax-secretion is neither voluntary nor strictly involuntary. I hold that we do not lose nearly so much by bees being obliged to build their own comb as is generally accepted.)

A new brood-comb with sealed worker-brood is ⅞ inch thick. An old comb is one inch. I have my top and bottom bars exactly the width of the thickness of sealed comb, so that I can see every part of the surface when they are built down to the bottom-bar; and when the parts are alternated the combs will be solid. I have for seven years used frames 13 inches long and 6 inches deep. The top-bars do not need to be ⅞ inch deep. That is just for strength.

A section of my hive is a super, a brood-chamber, or an extracting-super, at will. An inset or empty space back of the end-bars gives room for the ends of the separators, when it is a section super, and also for a Z-shaped piece of tin to support the frames, when a brood-chamber or extracting-super. Little tin shoulders on the lower ends of the separator-cleats take the place of T tins. Separators without cleats are used for the extracting-combs. Deep-cell foundation is still uncertain, but we know the value of bait-combs, and in this hive two extracting-combs, one at each side of the super, serve as bait-combs. It is comprest on all sides by ordinary stove-bolts, with the burrs inside, moving in slots, so that the last separator may be inserted. The hive is not so expensive as the Heddon hive.

I cover my sections with an inner cleated cover with a bee-space. The wax in sections is sometimes brought almost to the melting point beneath single board covers.

R. C. Aikin.



The Bee-Supply Factory of The A. I. Root Company—One of Our Advertisers.

FIRST DAY—Evening Session.

BEST HIVE FOR THE AVERAGE FARMER.

F. Rauchfuss—What hive is best for the average farmer who wants to know as little as possible about bees? I think the box-hive. I know several farmers who have a few box-hives who take up the heaviest and the lightest in the fall. They get some honey every year. The question of inspecting for foul brood appears to be a greater difficulty than it is. They have foul brood in England, and plenty of "skeps." It is an easy matter to invert and cut out a piece of comb with a crooked knife. A frame hive improperly managed is worse than a box-hive.

Pres. Aikin—At the Farmers' Institutes I tell the farmers to use boxes 16 or 18 inches each way for hives, and to select not to exceed five for a permanent stock. When these swarm the swarms are apt to be put in boxes with starters. About November, when all the brood is hatcht, the bees of the swarms are to be sulphured and their combs cut out. All pollen-cells should be cut out. These may be detected by holding the combs up to the light. Then the combs are to be masht up and strained in the old-fashioned way. If there is any disease the inspector would prefer to inspect a plain box-hive rather than a mismanaged frame-hive. I told them I was selling supplies, but in the face of my financial interest I would inform it was perfect foolishness to buy patent hives if they were not used right. If one has scruples about killing bees a large box may be put on for a super. But this honey should not be produced for market.

FOUL BROOD AND HONEY.

QUES.—In case a colony has foul brood is the section-honey infected?

Pres. Aikin—There is danger. It is a doubtful question. But when the colony is badly infected then the surplus honey partakes more or less of the odor. But if there are only a few cells of foul brood in a hive I would not hesitate about eating the honey.

Mrs. Rhodes—The trouble is, that the wood of section-honey is usually thrown away after cutting the honey out.

MELTING COMB HONEY—HONEY IN TIN CANS.

A discussion on melting comb honey followed.

Mr. Elliott—I extracted a good deal by heat, using a can like a coffee-urn with a water-jacket. Altho the honey was left in a long time it did not change its flavor.

F. Rauchfuss—We use a tank with a double wall, with two faucets, an inner and an outer one. With this arrangement honey may be spoiled by leaving in too long or heating too high.

Mr. Elliott—If the honey is drawn off as soon as melted it is all right; if left a little longer it shows a very little color.

Pres. Aikin—At the melting-point of wax heat has almost no effect on honey. At 180° it is colored. High heat is more effective in coloring it than a long-continued low heat.

QUES.—If honey is left in cans what is the effect on the tin?

F. Rauchfuss—Unripe honey corrodes the tin; ripe honey does not.

[Continued next week.]

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for $1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at $1.00), and 10 cents extra.

* * *

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 20 cents; 100 for 35 cents; or 200 for 60 cents.

* * *

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

☞ See "Bee-Keeper's Guide" offer on page 284.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Boiling and Feeding Foul-Broody Honey.

What can I do with about 60 pounds of honey in Hoffman frames, from colonies that died of foul-brood last winter? Could I safely feed it by boiling? MICHIGAN.

ANSWER.—Put water with it, bring it to a boil, then after it comes to a boil *keep it boiling for two hours and a half*, and feed so as to have it used up in brood-rearing.

Hiving Swarms on Frames of Granulated Honey.

I have handled bees more or less for many years, but I am yet not satisfied whether it pays to keep frames of granulated honey to hive swarms on. Of course, they will remove the honey from the combs, but does it not cost them as much as the combs are worth? Do the bees get any benefit from granulated honey? WALTON.

ANSWER.—There is generally more or less of the honey that is liquid, and very likely this pays the bees well for the labor of getting it. It is also possible that they liquefy some of the solid part. Certainly, however, they throw out some of the solid grains. It might pay to have some arrangement like setting the hive in a shallow box, so that the granules they throw out might be saved and melted.

Italianizing Later.

I have a large colony of black and hybrid bees in a dovetail hive. There are two small apiaries each within a mile of me, of the same kind of bees. Now, I would like to know whether to introduce an Italian queen now, before the honey harvest, or wait until afterwards? In the first case laying would be stopt for a short time; in the second case, if a swarm came out I should have to buy two queens. Would it pay to Italianize at all, being located so near black bees? MINNESOTA.

ANSWER.—Most surely I should Italianize. At the distance of a mile you may do very well, and even if you cannot keep the stock pure—very likely you can't—you will gain by the change of blood. Likely you will do well to Italianize at or near the close of the harvest. Not so much harm will come then from failure in introducing, and queens cost less at that time than now.

Bees Dying in One Colony.

What is the cause of bees' wings turning a light-brown color and withering, and in a short time they die? Can anything be done for them? Since about the middle of February there has been about a foot of water in the root-house where I wintered them. But I hardly think that can be the reason, as of the 10 colonies only one of them is affected in this way, all the rest being in a strong, healthy condition. WISCONSIN.

ANSWER.—I don't know. "Wings turning a light-brown color and withering up" beats me, and I'll be glad if any one will help out. Wish I could see them. It is just possible it is a case of diarrhea, for sometimes in a bad case the wings get daubed. If that is the cause they will come out all right of themselves with this warmer weather, unless already too much depleted.

Effect of Honey as a Food.

I would like to propound this: In what way does honey act on the system as food? If it is to be considered as a food it must be reckoned among, or one, of the carbonaceous foods. I have also read that it is heat-giving. One author says that honey undergoes no process of digestion in the animal system, but enters the circulation at once, and enters the process of disintegration and the formation of lactic acid, and at the same time giving rise to heat, and so in this manner the heat is produced; certainly a very valuable aquisition, and so the means for curing so-called colds are acquired. Now, if such is the case, it should follow that it is also a preventive to catching colds, and I hold a very strong opinion that it does do the latter, and to this latter I can ascribe the power of the virtues of honey. I have ample experience with it. I call honey a prophylactic, to that extent.

Also, I have read that it is a fat-forming element. If this is true, it cannot be correct as to the lactic-acid theory. This would be a very interesting question for the scientific doctors to elucidate.

It is also said that cane-sugar entering the animal system has to undergo a digestion process, the conversion into glucose, chemically the equal to honey in its nature. It is claimed quite commonly that cane-sugar produces fat in the animal system. If this is so, then the honey forming a fat cannot be a paradox. I am inclined to the theory that neither cane-sugar nor honey are fat-producing elements. ONTARIO.

ANSWER.—Yes, honey contains carbon, and like all carbonaceous foods, it is heat-producing. It is also true that it is a fattener, which does not conflict with the fact that lactic acid may be produced from it. Honey is much used, singly or combined, in the treatment of coughs, but I wouldn't like to place too much dependence upon it as a prophylactic. If you take the necessary steps to catch cold, such as sitting in a cold draft, getting the feet wet, etc., a previous feed of honey will hardly excuse you from the penalty.

Plan to Build Up and Prevent Swarming.

I have two colonies that are pretty strong, and five that are weak. I propose to take most of the sealed brood from the two weakest and distribute among the other three weak ones, and continue that until near the harvest-time. In the meantime give to the two strong and three that I am building up, a case of half-depth or extracting-combs, on top, to give the bees a chance to deposit any surplus they may get, so they may have every chance to fill up the brood-chamber, which is an 8-frame dovetail.

At about the commencement of the harvest I will put a super of sections on top of a queen-excluding honey-board under the extracting-combs, and take the extracting-combs off when the bees get to work in the sections. At the same time of putting on supers, I will also put a half-story of extracting-combs with full foundation sheets under the brood-chamber, to try to prevent swarming, after Simmins' plan.

1. What do you think of my plan?

2. Do you think I will need to use the queen-excluder?

3. If the plan does not please you, will you give your plan under the circumstances? OREGON.

ANSWERS.—1. Not bad.

2. I don't believe you will.

3. Taking from the two weakest to give to the other three weak ones is good, unless indeed the best two have room for more brood. At any rate take from the weakest and give to the strongest till the strongest are full of brood, then these strongest and the weakest can both be drawn from to make the next strongest full. In this way you'll not need to put on extracting-supers before harvest, and may have a larger number strong. But don't take brood from a strong colony till it is crowded, or at least full. I've some doubt whether you'll like the frames of foundation under in harvest. Try only part that way.

Using Hives Where Bees Died—Painting Hives.

Last winter three of my colonies of bees died, and when I examined the hives I could find no queens or queen-cells in any of them.

1. What is best to be done with the honey that was left? Can I put new swarms into the hives just as they are? (I took out all the dead bees that were in the combs.)

2. Does it make any difference to have a hive with seven frames or more?

3. What color is best to paint a hive? Is there any objection to red paint? ILLINOIS.

ANSWERS.—1. Put swarms in them just as they are, honey and all. But look out that worms don't spoil the combs before swarming-time. If you keep them in a cool cellar the worms will not make much headway. If they are in frame hives, perhaps it may be more profitable to give at least part of the honey to bees in the other hives, for at this time of year they use a big lot of honey in rearing young bees, and may need more than they have. If it's needed in that way that will be better than to keep it for swarms.

2. Yes, but I'm not entirely certain what the question means. If you mean to ask whether it will be just as well to have only seven frames in a hive, that depends on the size of the hive. In any case you will put in the frames at regular distance so they will be 1⅜ or 1½ inches from center to center. If that isn't what you mean, please ask again.

3. If the hive is to stand out in the sun, nothing is better than white. In the shade it doesn't matter particularly what color, and red is all right. But I'd rather not have the body of a hive painted, only the cover. G. M. Doolittle says he wouldn't let you paint his hives if you paid him a dollar apiece for the privilege.

The Kind of Hive.

What kind of hives do you prefer? I am a beginner. OHIO.

ANSWER.—It doesn't make very much difference to the bees what kind of a hive you have, the old-fashioned straw skep being as good as any, and there are different hives that might suit you equally well, but in beginning it's just as well and better to have something that's standard, and that is always kept in stock. That makes it an easy thing to get more of the same kind at any time, also to get any parts you want, and being made in large numbers they cost less. Perhaps nothing comes so near a standard article in the way of hives as the dovetailed with frames 17⅝x9⅛. It doesn't matter so much whether you have an 8-frame or a 10-frame hive; so long as the frame is standard size you can easily change from one size of hive to another.

Laying Two or More Eggs in a Cell.

The latter part of February, when examining my hives, in one I found no sign of a queen, but I knew I had seen one late last fall, so I closed it up snug on five frames. About three weeks later I found in the same hive a nice yellow queen, but no brood, so I closed it up again. Yesterday I found a little brood (about two inches) and a circle of eggs about three days old—a circle about three or four inches in diameter—but the eggs were doubled up, as it were, from one to three in a cell. Having seen nothing in the text-books to apply to such a case, except a laying worker, I ask if you think it will be all right? If so, what is the cause? OREGON.

ANSWER.—The probability is that all is well. The queen is likely a good one, and ready to do all the laying required of her and a little more. The space kept warm enough for brood-rearing is so small that she is obliged to repeat, laying in cells already occupied.

Bees Vary in Working.—The different reports as to this or that flower as a honey-plant are sometimes confusing. One man reports that bees work busily upon a certain flower; another says it is worthless as a honey-plant. Both are honest. A difference in soil or growth may be the explanation, but more likely it arises from the fact that in one case the bees had something better to work on, and in the other case not. An article in Australian Bee-Bulletin quoted from Agricultural Gazette, gives the following striking illustration:

"Some years ago, at Cooma, in a dry season, a bed of turnips ran to flower. They were sown on a sandy, thirsty soil. For three or four days they were besieged by bees. Almost suddenly the bees ceast to visit the turnip-blooms, altho they were still expanding. The cause of their forsaking the turnips became evident. About one-third of a mile away, on the banks of a creek, a small paddock of lucerne had flowered, and the bees were bestowing their attention on it, because it was yielding a greater supply of food. Their harvest from the lucerne lasted but a day or so. The scythe stopped the honey-flow, and the bees returned to the turnips. Was it the dark-blue flower of the lucerne that caused the bees to forsake the creamy-yellow flower of the turnip, or the superior quantity of honey contained in the lucerne? Undoubtedly the latter."

* * *

Putting Bees Out in Spring.—A. Bridge, in Canadian Bee Journal, objects to the plan of putting bees out of the cellar part at a time. He says the first lot will take a cleansing flight, mark their location, and then they are ready for robbing those set out later. Since adopting the plan of putting all out at once, he has no trouble with robbing.

AMERICAN BEE JOURNAL
ESTABLISHED IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, Editor.

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UNITED STATES BEE-KEEPERS' UNION

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 38. MAY 5, 1898. NO. 18.

EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Thos. McDonald Relief Fund.—Mr. C. P. Dadant, whom we selected on page 248 as the receiver of contributions for Mr. Thos. McDonald—the unfortunate Shawneetown bee-keeper—reports the following names and amounts so far:

Hon. Eugene Secor	$5.00	A. Y. Baldwin	$1.00
Todd & Arnold	1.50	H. W. McComb	1.00
A. H. Kemman	1.00	H. Lathrop	1.00
George W. York	1.00	G. W. Bistline	.50

Chas. Dadant & Son's contribution was $10. We hope that others will yet send in what they can to C. P. Dadant, Hamilton, Ill., and thus help Mr. McDonald get started again in the bee-business.

◆

Sweet Clover.—By thorough experiment it has been proven that sweet clover grows luxuriantly in places where few or no other plants flourish. Being a legume, it fixes atmospheric nitrogen and stores it, occupies lands that have become unfitted for growth of other plants, and thus ranks as a useful plant capable of increasing the fertility of land. "The plant is the farmer's friend, to be utilized and not outlawed," says the bulletin issued by the Ohio Experiment Station. Stock will thrive upon it if confined to it until accustomed to it. This last statement is one that Prof. Cook might do well to accede to, or else clearly prove its general falsity.

◆

Langstroth Monument Committee.—On page 249 we suggested a committee to take in hand the raising of the Langstroth Monument Fund. But Mr. Doolittle offers the following in regard to himself:

> DEAR BROTHER YORK:—I have just noticed what you say on page 249, about Doolittle being one of the proposed "Langstroth Monument Committee." Now, please don't, for Doolittle is so overworkt with what he has to do now that he hardly finds time to sleep, and this thing has got to stop somewhere, or Doolittle soon passes to the "beyond." I am up in the morning at 5 o'clock, and on a continuous "jump" from then till 10 or 10:30 at night, without accomplishing all that should be done, then. I tried hard to get out of writing for the bee-papers last year, but you all said *no*, so I finally concluded to keep on for another year, as it was thought no one could take my place in this writing matter. But some one *can* take my place on that committee from this State, as we have very many admirers of Father Langstroth here. Allow me to suggest that the name of P. H. Elwood take my place. Not but what we have others equally good, but he is probably the best known of York State bee-keepers, having been President of the North American Bee-Keepers' Association, and held many other important offices among our bee-keepers.
>
> Very truly yours, G. M. DOOLITTLE.

Mr. Doolittle's letter is all right, and so is his suggestion of Mr. Elwood. It will be remembered that we simply *suggested* five names as the committee, believing that the five named would make a good committee, and they would. No doubt the other four would serve, and with Mr. Elwood to help for the East would be all right so far as we are concerned. But don't forget that *we* are not *running* the thing at all—only trying to help a little. If the committee we offered meets the approval of the rest of the bee-keepers, well and good. If not, then it is all right, too.

But we think something definite ought to be done soon, so that by fall the monument can be erected and paid for.

◆

The Prospects for the Season must be good among bee-keepers in general, for supply manufacturers complain of being behind orders in spite of running over time. But J. H. Martin says in Gleanings: "Southern California is strictly in it for a short crop of honey again. Ventura county, where the best quality of honey is produced, is as dry as a bone......You Eastern honey-producers will not have the California crop to compete with you the coming year."

◆

Disappointed Bee-Keepers will be in abundance a little later on, if the honey season should be a good one. Already some bee-supply factories have been running day and night for a month or two, and are still behind in their orders. It seems to us it would be well for those wanting supplies to send in their orders *at once*, so that any delay in filling may not affect them. Also, when possible, give your dealer a chance to substitute other goods if they can be used, in case he is out of the particular kind really desired. Often by so doing your order can be filled sooner.

But above all things don't get impatient and try to blow your dealer sky-high when he is doing his level best to serve you and many others who are equally deserving and anxious to get supplies. When the rush is on don't add to his worries by dumping on him an over-supply of boiled-down wrath. Keep cool yourself, and thus if possible try to help your dealer in his nerve-straining efforts.

◆

Cost of Apiarian Improvements.—On page 225, Mr. F. L. Thompson had a criticism on the no-drip shipping-cases and some other recent improvements in bee-appliances. In Gleanings for April 15, Editor Root replies to Mr. T.'s criticism in the following manner:

> F. L. Thompson, in the American Bee Journal, thinks the price of honey does not bear a just proportion to the price of supplies; and then he goes on to give the cost of the fence and plain sections. In regard to shipping-cases, while he does not condemn the no-drip style, he would like to have something simpler, something that requires less labor to fix up. I grant that there seems to be much of truth in this. But let us look into the matter from another standpoint.
>
> Altho we may not at present seem to be doing it, we are striving to save in every way possible that one big item he refers to—labor—on the part of *the bee keeper*, and cost of sup-

plies. Regarding this, compare prices of a few years ago with those of to-day; sections especially have fallen. If plain sections ever get to be popular, it ought to be patent to any man who "can see through a ladder," that they can be made cheaper, and will consequently be sold for less money than the old-style sections *using more timber, and requiring more labor to make them.* Plain sections, of course, cost a little more than they will in the future, because this is really their first year in the market; *i. e.*, they have been pusht into prominence. It is hardly fair to compare the cost of these things with that of other separators and other sections that have met the competition of the markets for years.

Why, we are working as fast as we can to avoid the expense of the extra amount of lumber; and, moreover, we hope these new fads are going to *save labor.* The old fads have done so, otherwise they would not be in the market to-day. Mr. Thompson would not avoid improvements simply because they cost money at first. Smokers, foundation, and extractors, for instance, were costly improvements.

◆

Honey-Mead, Metheglin, Etc.—It seems that a subscriber to Gleanings decided to stop taking that paper because it refused "to print a recipe for making mead or metheglin (intoxicating drinks) of honey." After giving his idea of such things, Mr. A. I. Root said:

> "I should not be very much surprised if all the other *good* bee-papers would take the stand that Gleanings does. How is it, 'brother editors?'"

Well, we can only speak for this editor and this paper, and we can't imagine how any one could get us to so far forget that we had a conscience as to print a recipe of the kind referred to. Not much. There is too much of using brandy in sauces and pies even, and thus begin to cultivate a taste for something stronger in the children and young people of our land. Why any one with any kind of a head on him should want to so debase honey as to make it into mead and metheglin, we can't understand, especially in these days when there should be great alarm taken at the way strong drink is destroying our people.

We are not personally acquainted with an editor of a bee-paper that we think would print a recipe for making mead or metheglin. What decent man would want to be guilty of teaching people how to gamble? And strong drinking is worse.

◆

A Course in Bee-Keeping. American bee-keepers are given to pluming themselves upon their advancement and the enterprise of their government as compared with others. That this pride is not always well founded may be seen by the following notice of a German enterprise:

> Course in Bee-Keeping in Ossmannstedt.—This year, as yearly, Pastor Gerstung will give a course in advanced bee-keeping at his apiary at Ossmannstedt, at Whitsuntide (May 31 to June 4). No charge for attendance, the only expense being for board and lodging. Those of limited means are informed that so far the government has always willingly afforded all necessary support to those who have made application for it. Apply direct to Pastor Gerstung, Ossmannstedt, Thuringen.

◆

Ginger Honey-Cookies are made as follows, according to a writer in Gleanings:

> One cup granulated sugar; 2 cups honey; 4/5 cup shortening; 1½ cups sour milk; 1 tablespoonful of soda; 1 tablespoonful of ginger; 1 teaspoonful of salt, and enough flour to roll out good. Put the sugar, honey, and shortening on the stove and stir till all is melted together; then take off and add milk and all the other ingredients. A. C. L.

We would like to invite our readers to send in any good, new recipes that call for honey among the ingredients used. Bee-keepers' families might well use more honey in place of buying less-wholesome sugars.

◆

Every Present Subscriber of the Bee Journal should be an agent for it, and get all others possible to subscribe for it.

THE WEEKLY BUDGET.

Prof. Leuckart, whom the older readers will remember as the able German scientist who helpt to establish the Dzierzon theory, died in January, aged 74.—Gleanings.

Mr. E. T. Flanagan, the veteran migratory specialist of the Mississippi valley, is at it again. This time Mr. F. has gone with 300 colonies nearly to the Rio Grande, in southern Texas, a move of about 1,400 miles from his southern Illinois home.—American Bee-Keeper.

Hon. Geo. E. Hilton's Mother died April 19. Had she lived a few days longer she would have been 72 years old. She was the mother of 10 children, 9 of whom are living. Her five sons acted as pallbearers. George E. Hilton is the well-known Michigan bee-keeper and supply dealer, also postmaster at his place in Newaygo county.

Mr. G. M. Doolittle's writings show conclusively that he is not "carried away" with the plain section, as some others of the fraternity seem to be. A four-piece nailed section is still used in his apiary; yet we do not know of another man in the United States who makes a small apiary pay as big as does Mr. D.—American Bee-Keeper.

Rev. H. Rohrs, of Rock Co., Wis., called on us last week. Owing to his time being limited, his stay was very short. Mr. R. is a great reader of the German literature on bee-keeping, and is much interested in the controversies that arise concerning bees across the water. He is making a success of bee-keeping, as would naturally be expected of one so interested as he is.

Mr. Wm. Stolley reports in Busy Bee that his bees have been trapt and killed by the bushel at a beet-sugar factory, and asks if the Union can help him out. There's probably no help for him with present laws; but if proper efforts were made laws might be secured obliging such bee-traps to screen out the bees. Bee-keepers, however, are very shy about asking any legal protection.—A "Straw" in Gleanings.

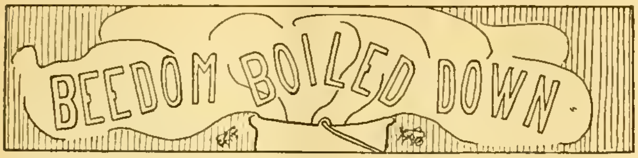
Mr. Fred L. Craycraft, of Havana, Cuba, we learn, tho amid the rumblings of war is still extending his business there by establishing out-apiaries; and that he will extract from over 1,000 colonies next season. Fred L. is one of the American boys who have made a success of bee-keeping, and he knows by years of experience in Cuba just what her capabilities are in the line of honey-production.—American Bee-Keeper.

Price of Comb Foundation Advanced.—Messrs. Chas. Dadant & Son and The A. I. Root Co. recently advanced their prices of comb foundation 3 cents per pound, on account of the growing scarcity of beeswax. We presume other manufacturers of foundation will also raise their prices. Bee-keepers should always remember that the prices of comb foundation are liable to variation, according to the shortage or abundance of pure beeswax in the market.

Mr. Ed Jolley is one of the jolly kind of bee-keepers. He has often contributed to the columns of the American Bee Journal, and also to the American Bee-Keeper, in the April number of which he gives this paragraph about "Jacob Vetterstein:"

> "We have in what is known as the Pennsylvania Dutch settlement an embryo bee-keeper, who gives promise of making a name for himself. According to Mrs. Vetterstein, the boy's mother, 'Shakey has two leddle poxes of pees, und he make honey more as a horse could haul. Shakey,' she says, 'is a shmart poy und he learns about pees like nottings. Mr. Kohlmeyer, who knows effrydings apout pees, tolt Shakey ef somedimes he dond know nottings apout pees, to come ofer und he vill told id to him.'"

We hope "Shakey" will found oud somedings alretty, mebbe, ven he talks mit Hans Kohlmeyer apout doze pees und der honig.



Mailing Queen-Bees to England has not been allowed for years. Now the embargo is taken off, allowing the transit of queens to and from the British Isles.—Gleanings, page 311.

Plenty of Alighting-Room in front of a hive is supposed to aid in the matter of white combs, for if the bees drop on the ground in front, their dirty feet soil the combs.—Gleanings, page 309.

Big Pay for Bee-Work.—Gleanings works out that F. S. Arwine made $15 per day from his bees in 1888, counting his honey from 184 colonies (16,240 pounds) at 10 cents a pound; $18 a day for 1889—16,766 pounds from 186 colonies.

Markets for Tall Sections.—Gleanings, page 313, says the tall section may not be suitable for all markets. It has a big demand in parts of York State and in other Eastern States, and is regarded with some favor in California, but Chicago will none of it.

Time and Place for Drawing Out Foundation are: Before or after hottest weather; in an apiary well shaded; by medium rather than strong colonies; at the side of the brood-nest, never in the middle; preferably between two finisht combs.—German Journal.

The Advantage of Big Entrances is shown by the fact that the bees are quietly at active work, while colonies with small entrances in hot weather roar like an approaching storm, some of the workers being thus kept from work to ventilate.—W. B. Ranson, Gleanings, page 308.

Tall Sections as made by the A. I. Root Co., are 3⅝x5x1½. O. P. Hyde & Son say, in Southland Queen, they prefer 4¼x5¼x1¼. Both are plain sections with fences. Altho the latter do not ship so well, they think the bees will build them out quicker, because more nearly the thickness of natural comb.

Uniting Weak Colonies.—Southland Queen says shaking bees off the combs into one pile will make them unite with little fighting, while they would fight if united on the combs. Cage the best queen, killing the others, shake all the bees into an empty hive, then give them the frames of brood and put the caged queen on top of the frames, the cage having candy in the orthodox way, so the bees will liberate her.

Bi-sulphide of Carbon for Foul Brood.—C. Davenport (Gleanings, page 296), repeats what he has already said in this journal about this cure, and the editor requests that those "given to an experimental turn of mind" whose bees have foul brood should try the bi-sulphide, calling attention to the fact that if successful, it is better than the McEvoy treatment in one respect, for it destroys only the brood, sparing the combs and frames.

Feeding Wax to Bees may be just as successfully done as feeding honey when the bees are in want of wax, says J. E. Crane, in Review, page 113. Scrape some thin shavings from the top of a cake of bright yellow wax, put them over sections the bees are capping, and in a day or two look at the mottled sealing of the sections. But he adds in a postscript, "After some experiments in feeding wax, I prefer to feed it in thin sheets—some call it foundation."

Young or Old Bees for Winter.—While in the opinion of many, late-reared bees form an important factor in wintering, C. Davenport, in Gleanings, thinks the age of the bees has little to do with the matter. In 1896 honey-gathering stopt with white clover, brood-rearing stopt early, and the following winter he lost only three out of 244. In 1894 a fall flow kept up breeding late, and the loss in winter was heavy, but he attributes it mostly to the character of the late honey. After all, it will be hard to convince many that young bees are not better. Even if 244 colonies came through with no loss of a single colony, is it not likely that there was a greater loss in *bees* than if the bees had been younger?

Foul Brood and Foundation—As bearing upon the question whether there is danger from using in foundation wax from an infected colony, the Ontario Experimental Station made some experiments. Foul brood germs were incorporated with wax which was barely melted and at once cooled. Foundation thus made was given in full sheets to six colonies, but no sign of the disease followed. According to that there is little to fear from foundation.

To Prevent Brood in Supers, M. l'abbe Pincot says all that is necessary, is to place the supers so the sections shall run crosswise, whereas if the sections run in the same direction as the brood-frames, the queen will go up and lay. M. Ch. Legrain replies that he placed sections running crosswise and had brood galore. Dr. C. C. Miller replies to the other part of the contention by saying that his sections run in the same direction as the brood-frames, and he had only two sections with brood out of 18,000.—L'Apiculteur.

To Stop Robbing, F. Chatelain says, in L'Abeille et sa Culture, he finds out from which hive or hives the robbers come, then proceeds as follows: Take a well-loaded smoker, and smoke the robbers; after two or three minutes close the entrance. When the robbers that were outside have gathered in numbers at the entrance, smoke them away and make an opening large enough to introduce the nozzle of the smoker, and give them another dose inside. Open wide the entrance and allow all outsiders to enter, then smoke heavily till the bees rush in a stream out of the hive. That ends the robbing.

Ripening of Honey.—O. O. Poppleton had exceptional opportunity while in Cuba, as he relates in Gleanings, to determine the rate of evaporation of newly-gathered honey in the hives. The shrinkage from first-gathered to well-ripened honey was about one-fourth, and that shrinkage took place almost wholly during the first night, only one-tenth of the entire shrinkage taking place after that time. So he thinks it a mistaken notion that there is any material gain in any way by extracting honey before it is ripe. He also found that the bees gathered just as much honey when they had 50 pounds in the hive as when they had only five, so there was just room enough to store what they gathered.

Management with Empty Combs.—A man has a number of colonies and two-thirds as many combs as those that are occupied. He asks G. M. Doolittle (Gleanings, page 304) how to manage for best results, his principal trouble being swarming during the honey-flow. He is told to have laying queens ready in advance in nuclei. When a colony is about ready to swarm, set in its place a hive with eight empty combs, and brush *all* the bees into it, giving it the supers. Then move another strong colony to a new location, set in its place the hive of brood-combs and brood without bees, and give it a frame with queen and adhering bees from a nucleus. Do this at a time when the most bees are flying, and the returning bees will stock it. Thus you'll have three colonies from two, and in good shape for work.

Tests of Foundation are reported by R. L. Taylor, in Review. Drawn foundation was promptly undertaken at once, and it appeared it would be first finisht, but on the contrary, at the end of the honey-flow (which was poor) a drawn-foundation section in the center of the case weighed only 70 per cent. as much as one of plain foundation beside it. If this was because the bees did not like the foundation and only used it until something better could be made ready, it condemns drawn-foundation. But he thinks it might be because the cells were promptly filled with thin honey which took a long time to be evaporated, in which case there would be no trouble if there were a whole super full of drawn-foundation instead of only six sections. He seems to think it is hardly a fair test to try a very few sections of drawn-foundation with others.

Dr. Beal, of the Michigan Agricultural College, measured the bases after they were workt out by the bees. The base of natural comb that seemed to be of about usual thickness measured about .007 of an inch. The others averaged about 11 per cent. less, all but the drawn-foundation, which was 37 per cent. thicker than the natural. The no-wall foundation was the thinnest of all, averaging .00433. It will be of interest to know how this will compare with the foundation the A. I. Root Co. are now making, whose base measures only .003 of an inch!

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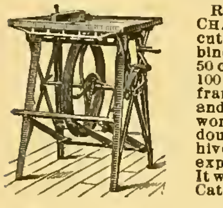

Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will. Catalogue and Price-List Free.
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GENERAL ITEMS

Small Fruits in Bloom, Etc.

Everything favors a good flow of nectar this season. Apples, peaches, pears and cherries are in full bloom. This is a poor place to keep bees, as the honey-flow ceases on or about the first of June—five weeks ends the season for salable honey. One year ago frost killed all of the flowers, and I did not get one salable section of honey. I have been feeding heavily. Bees are in fine condition. Last fall, in looking them over, I found three queenless colonies. I sent for three queens, and they are as fine as can be. I have 27 colonies.

"New Jersey" wanted to know where his bees collected that pollen so early in the spring. It was from tag-alder and a little from willow. J. H. Allen.

Nansemond Co., Va., April 11.

* * *

Report for 20 Years.

My report for 20 years of keeping bees and producing honey is as follows:

Year.	Colonies.		Sold	Died	Lbs. Honey.	
	Spring	Fall.			Comb.	Extr'd
1878....	1	3	....	3	......	......
1879....	2	9	....	....	......	......
1880....	9	31	1	....	900	100
1881 ...	30	54	...	....	1800	700
1882....	54	80	12	....	4500	1000
1883....	68	100	17	45	4000	1400
1884....	40	81	8	27	3100	1100
1885....	46	94	15	3	2800	1300
1886....	77	83	1	14	3300	1200
1887....	68	76	....	10	2100	800
1888....	66	75	....	10	2300	1700
1889....	65	73	....	8	2000	500
1890	65	67	....	27	......	......
1891....	40	66	6	12	3200	1800
1892....	48	63	....	13	1100	200
1893....	50	80	....	3	2500	1000
1894....	77	90	....	10	2100	1000
1895....	80	86	....	16	2600	500
1896....	70	85	....	5	3100	300
1897....	80	90	....	....	2500	500
To 1,	1.036	1,386	60	206	43.900	15.100

I winter my bees out-doors, packt in chaff and sawdust. My bees are Italians, of the yellow kind. I clip the queens, so none go to the woods. I have taken the American Bee Journal about 20 years, and from it I have learned to make bee-keeping pay.

Ashtabula Co., Ohio. L. D. Ormsby.

* * *

Some Experiences with Bees.

Last summer I had a colony of bees that workt in the sections for awhile and finally slackt up. At this time it seemed that there might be robbery connected with this colony, as the ground in front of the hive was black with dead bees. I saw the bees were fighting as if robbers were about. Then taking my coffee-pot smoker, I gave them a good smoke and left them. On returning the next day I found the same condition of things. I smoked them again, and this not helping matters, I determined to open the hive below. On lifting the super, which was about half full, and taking out the brood-frames, I found that they had the hive nearly full of honey below. So I took out over half the honey below, filling in with empty frames, and putting on the super again. Now the fighting stopt, and the bees went to work in earnest. It was not long till I raised the super and put on a second. Things went on at a lively rate the rest of the summer. I know nothing else than that the bees were discouraged with the condition of things.

My bees having been in double-walled chaff hives the past winter for nearly four months without a flight, and the snow being deep in the apiary, I concluded to give

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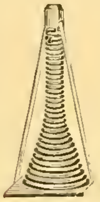

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Baptist Anniversaries, at Rochester, N. Y., May 16-24, 1898—The Nickel Plate Road is authorized to sell tickets to Rochester, N. Y., and return, at one fare and one-third for the round trip, on certificate plan, account of above meeting. Tickets good on any of our through express trains leaving Chicago daily from Van Buren Street Passenger Station at 10:35 a.m., 2:55 p.m., and 10:15 p.m. Vestibuled sleeping cars and unsurpast dining car service. You will save time and money by patronizing the Nickel Plate Road. For further information address, J. Y. Calahan, Gen'l Agent, 111 Adams St., or telephone Main 3389. (16)

them a flight at any rate. My hives face the east, so when the snow was melted enough so that bees would not sink in it and be frozen, and the air was warm enough so they would not chill, I began work. This did not come till about March 4. I began my work after dinner, by taking the hives out and placing them on the snow-drifts, behind the chaff hives, facing the west. Then I scratcht out enough dead bees so the live ones could get out. How they did fly! The whole apiary was in a delightful hum. I lost scarcely any bees that day. Those that lit on the snow would rest and then take to wing again. From this time on the queens and bees went to work. So as to keep the bees warmed up I soon took out one wall on the east side of the chaff hive—I put from 6 to 8 hives in one long chaff box—so the morning sun could warm them on fine days. This spring, so far, my bees are ahead of anything I ever had before. Remember, after I removed one wall there were two left—the hive itself and one wall of the chaff box.

March 14 I began to feed chop to my bees—ground corn and oats. I called just one man in to see them work on the chop. He said it beat anything he ever saw. This affords a good supply of pollen for beginning brood-rearing. I think this may be given as soon as they will work on it.

This is the second year that I am feeding ground corn and oats. Fresh chop should be given every day. Those who are curious to know something about this should try it as soon as they read this if pollen is needed. I had honey beside one box of chop one day, but the bees did not touch it. So I took it away. D. J. Blocher.

Stephenson Co., Ill., March 25.

Wintered Well.

Bees have wintered well, and we have 300 strong colonies to begin the season with. We are in hopes to have a good season.

F. A. Lockhart.

Warren Co., N. Y., April 3.

Have Wintered Well.

Bees wintered finely here. I put 83 colonies into winter quarters, and all have come through in fine condition so far, and the prospect for a honey crop is good.

A. W. Swan.

Nemaha Co., Kan., April 7.

Five-Banders Winter Well.

My bees have wintered splendidly, and are in the best condition that I have ever had them at this time of the year. Tell some of the brethren to stand aside a little, as I might step on their toes in regard to the 5-banded Italians not wintering well. I had 73 colonies of the 5-banded, and 2 of the 3-banded Italians, wintered on the summer stands in single-walled hives, and lost only one colony, so I don't think 5-bands or 3-bands, or no bands, have much to do with the wintering problem.

W. S. Feeback.

Nicholas Co., Ky., March 31.

Cutting Alfalfa for Honey.

On page 97, I understood Prof. Cook to say that alfalfa is better for hay when cut just before it blooms. This is a sad misstake for both the stock and bee-men. Many have had the sad experience of dragging out a lot of their finest steers, killed by bloat, or a lot of washy hay by starting the mower too soon, and attempting to use it at the stage referred to by Prof. Cook.

About 20,000 head of mountain steers are brought down from the mountains to feed on the alfalfa hay put up in the valley each fall and shipt during the winter and spring. We also ship out 15 to 20 carloads of honey annually. I believe every one of our stockmen—and I know all of our bee-men—will agree that the experiment stations were correct in their statements when they tested the question referred to by weighing three different lots of steers and cutting

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alfalfa hay at three different stages, the first stage when in bloom, second a week later, and thirdly after the bloom had dropt and the seed nearly ripe. The first mowing was eaten greedily, but was too washy to fatten satisfactorily; the last mowing was too ripe and woody, while the middle stage was far ahead of either of the others, and was entirely satisfactory, thus establishing the fact that the All-wise Creator intended that the bees should get the benefit of almost the entire bloom before it is cut or pastured, and has attacht a penalty to those who violate His laws.

My neighbor tried violating this divine law by turning a fine bunch of three-year-old steers on his alfalfa before the bees got their share, and in less than half a day 16 of them were dead from bloat, and many more were only saved by sticking, to let the gas escape. Since then 360 colonies of bees feast on the bloom of his alfalfa before the mower or the cattle touch it.

Maricopa Co., Ariz. B. A. HODSELL.

◆

All Wintered Well.

I took my 30 colonies out of the cellar April 2, after a confinement of just four months and five days. All are in fine condition, and not a colony perisht. I left 11 colonies on the summer stands, and 10 of them are all right. A. F. FOOTE.

Mitchell Co., Iowa, April 5.

◆

Bees Wintered Nicely.

Our bees wintered nicely, and are in fine condition. I wintered 150 colonies in single-walled hives without any loss. A part of them were packt on the north and west sides of the hive, but those that I did not pack seemed to get through best. I am more than ever convinced that the principal thing in wintering is not outside protection so much as plenty of good, sealed honey; and that bees fed sugar syrup will winter as well, if not better, than on honey.

J. L. GANDY.

Richardson Co., Nebr., April 9.

◆

Bees in Florida and Southern Indiana.

While in Tampa, Fla., this winter I made inquiry to try to find if there were any bee-keepers in that vicinity, but I could hear of none, but suppose there must have been bees not far away for the orange trees were beginning to bloom, and I saw a few bees working on them. I found some Mississippi honey in the stores branded "White Clover," but it wasn't what our clover honey is, by any means.

I found my seven colonies in very fine condition, on my arrival home. I left them on the summer stands well provided with stores, and protected with covering over the frames. It is too early to tell what the white clover will be this season, but if as abundant as last season, I shall reap a bountiful harvest of honey.

The spring in southern Indiana is three weeks in advance. Peach trees are in bloom, and some other kinds of fruit-trees. Fears are entertained that the frosty nights and cold days will kill or injure fruit of all kinds. W. C. R. KEMP.

Orange Co., Ind., April 2.

◆

Bee-Keeping in Virginia.

My apiary is located near the center of the Page Valley on the course of the Shenandoah river. I began bee-keeping in the spring of 1895, by buying two colonies in box-hives. The bees were kept in box-hives until the spring of 1896, as my neighbor bee-keepers told me they were the best hives in use, and they said that the frame hives were not fit to keep bees in. I could not think so, so I visited a bee-keeper who had 20 years experience in the bee-business, and he told me if I wanted to keep bees for profit I should get the frame hives. I bought one of his hives, 12x14 inch brood-chamber, the super 5 inches high, which held six 4-pound frames. I thought that it was the very hive that I wanted, so I made hives and transferred my bees to them. I

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◆

Illinois—The spring meeting of the Northern Illinois Bee-Keepers' Association will be held at the residence of Alexander Patterson, 5 miles northwest of Rockford, Tuesday, May 17, 1898. All are cordially invited.

B. KENNEDY, Sec., New Milford, Ill.

soon found that they were no better than the box-hives, as the honey was in such a shape that I could not market it. I subscribed for the American Bee Journal, and soon found out the hives that were in use. My neighbor and I sent for a lot of hives and other supplies, and I transferred my bees to the new hives. I now have my bees all in fine condition, waiting for the honey season when it comes in the spring. I will Italianize my whole apiary, as I think the Italian bees are superior to all others.

We have a very good location here for bees. First comes the maple; fruit and willow, which starts brood-rearing; then comes the locust, whitewood, etc., from which we get a fair crop of honey. Then our fall crop comes, the aster and goldenrod. which we generally get a fair crop from. Last season was a poor one, altho I got a fair crop of honey in the forepart of the season, when the drouth set in and I had to buy sugar and feed my bees to keep them alive. C. H. May.

Page Co., Va., Feb. 24.

◆

Report for 1897.

I commenced in the spring with 46 colonies, and increast to 101. I sold 50 colonies. I have a neighbor that had 16 bee-trees, and he gave me the bees for cutting the trees. I gave him the honey. So I filled up some of my empty hives, and now have 67 colonies all in good condition. They have been gathering pollen this week from elm in the river-bottom.

Last year I got 3.000 pounds of comb honey, and sold it for 8 and 10 cents.

Goliad Co., Tex. W. W. Williams.

◆

Prospects Not Flattering.

Prospects are not very flattering here for a good honey crop. We have had a very dry winter and spring up to a few days ago. We had a good rain, but it has turned off cool. Flora in this section has been greatly injured by forest fires. Bees wintered in fine condition, and are now very strong and ready for what flow we may have.

The Bee Journal is always prompt, and like a picnic basket—full of good things.

Lee Co., Ga., April 6. R. P. Johnson.

◆

All Wintered.

Last season was a good year with me, and I had success in wintering, getting my bees all through without losing a single queen in cellar-wintering. I took them out of the cellar March 10. and I have been feeding rye-flour, which I think is a good thing in early spring, before natural pollen can be had; it keeps them from trying to rob, and I think it stimulates brood-rearing. It is surprising to see how much of it they will lug off in a day. The way that I got the bees to work on it was to sprinkle green sawdust over it, which they were to work on. C. W. Gerrish.

Strafford Co., N. H., March 29.

◆

Moth-Trap—A Freeze.

I notice on page 183 a bee-keeper complains of the moth devouring his bees. If he would not leave pieces of combs scattered about, keep his bee-yard nice and clean, and have good, strong colonies, he would not be bothered with moths.

I will give a good plan to catch the moth-millers:

Take a big camp-meeting lamp and set it in a pan 16 or 20 inches across, and three or four inches deep. Set the lamp in the center and pour water in the pan till within an inch of the top, and put in one pint of coal-oil. Set the lamp in the bee-yard at night, and let it burn all night, and you will catch all the moths that come around.

Now, I don't want bee-keepers to think that I sit in the back end of a tin-shop, and want a patent on this moth-trap.

Put one lamp to every 25 colonies. Catch all "toad-frogs" in the bee-yard. Confine them in the garden, and they will catch all of the insects and cut-worms.

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8 L. frames of bees in light shipping-case, $3.75
5 at $3.50 each.
8 L. frames of bees in dovetailed hive, $4.25.
5 at $4.00 each.

Prompt shipment after May 1, and safe arrival and satisfaction guaranteed. Address

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About 90 Colonies of Italians. Any one wanting to start an apiary cannot do better than to call on Dr. E. Gallup, Santa Ana. Calif., and examine the Bees before purchasing elsewhere. Double sets of Combs in Langstroth-Simplicity Hives, and warranted a superior lot of Bees for business. Correspodence solicited. **Dr. E. GALLUP,**
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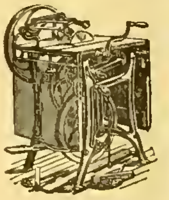

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17ASt **Mrs. A. A. Simpson, Swarts, Pa.**

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AUGUST WEISS, Hortonville, Wisconsin.

wind came down on us. The mercury was at 80 degrees, and in 15 minutes it fell to 40 degrees, and on the morning of the 24th froze out all of the corn and fruit. Bees were breeding up fine. I saw some chilled brood, and the bees were pulling it out. Texas has a great many slips 'twixt the cup and the lip, and I think this is a big slip.

F. J. R. DAVENPORT.
Ellis Co., Texas, March 20.

◆

Pickled Brood.

My colonies the past year were sorely troubled with "pickled brood." I observed this disease in one or two colonies as early as 1890 and 1891. Then and subsequently it did not spread, and did not prevent the diseased colonies from storing some surplus. In 1897 the case was very different. Two colonies were well-nigh destroyed, while two others were seriously impeded. Only one colony escaped the disease altogether.

I tried various remedies without avail. I went so far in the case of two colonies as to remove with pincers all diseased brood every three days or so. After the removal the combs and bees were generously treated with germ destroyers. The disease continued unabated.

The disease appeared in April or early May, reacht its hight in June, began to abate in July, and it disappeared in August. It seemed to flourish in cool, cloudy weather. The hot, dry weather apparently killed it.

The two colonies that had the disease the worst were doubled in July, after all the old bees were removed. Later on the old bees were again removed. These old bees were put with a queen into a new hive with foundation. The disease did not show itself in this new hive nor in any swarms from diseased colonies.

ALLEN LATHAM.
Norfolk Co., Mass.

◆

Alsike Clover—A Report.

Bees are in fine condition at present. We are having plenty of rain this spring, which we were badly in need of. The clover looks fine now, and the prospect for a crop from white and Alsike clovers is good, and there is plenty of it around here. Alsike is the clover for low land. I have seen water stand on it for weeks, and it did not injure it in the least. We have tried red clover, but it will not do well on low, wet land, but the Alsike clover will do all right. The right seeds in the right place and both clovers are good.

At present I have 68 colonies in fine condition. That is the most that I have ever started with. Last spring I had 48, and extracted about 5,500 pounds of honey, and had 500 pounds of comb honey besides. If I have such a crop it will pay to keep bees, but we will have to take what we get.

I have a fine locality for bees and honey. We have a fine honey-plant that I call "fireweed." It grows in the pastures; it has blue flowers, and blooms for a long time. It yields honey in abundance, and of fine quality. Sweet clover is started, and bees work on it all the afternoon till night. Hurrah for the American Bee Journal! Long may it live! As long as I keep bees I want the American Bee Journal.

JACOB WIRTH.
Henry Co., Ill., April 11.

Supreme Council of the Royal Arcanum will hold a meeting in Cleveland, Ohio, May 18-25, for which the Nickel Plate Road is authorized to sell tickets at one and one-third fare for the round trip, on certificate plan. Unexcelled dining car service. Vestibuled sleeping cars. Three through trains daily from the Van Buren Street Passenger Station. For full particulars call up telephone Main 3389, or address J. Y. Calahan, General Agent, 111 Adams Street. (13)

Bee-Keeper's Guide—see page 284.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, April 20.—Fancy white comb honey would bring 11 cents, but there is none here; other good grades of white at 9 to 10c.; dark and amber, 7 to 8c. Extracted, white, 5 to 6c.; ambers, 4½ to 5c.; dark and off grades, 4c., with exception of dark candied and amber grades. This market is bare of comb, and while prices have been low the quantity sold locally has been greater than last season. Beeswax scarce, and sells at 27c. for average lots. R. A. BURNETT & CO.

Kansas City, April 20.—Fancy white, 9 to 10c; No. 1, white, 9c; amber, 8 to 9c. Extracted, white, 5 to 5½c; amber, 5c; dark, 3½ to 4c. Beeswax, 20 to 25c.

Comb honey is selling fairly well, but prices are low; considerable shows signs of candying, which makes dealers anxious sellers.
C. C. CLEMONS & CO.

Cincinnati, April 19.—Demand fair for extracted, at 3½ to 6c. according to quality. Demand for comb is slow at 10 to 13c. for best white. Beeswax in good demand at 20 to 25c. for good to choice yellow.
CHAS. F. MUTH & SON.

Boston, April 14.—Fancy No. 1, in cartons, 13c.; in glass-front cases, 12c.; A No. 1, 11c.; No. 1, 9 to 10c.; No. 2, 9c. Extracted, white 6 to 7c.; light amber, 5 to 6c. Beeswax is scarce at 26c.

Our market on comb and extracted honey has kept active at old prices, and as a result the stock is well cleaned up. There is very little call for anything but white in this market. BLAKE, SCOTT & LEE.

Cleveland, April 14.—Fancy white, 12 to 12½c.; No. 1, 11c.; No. 1 amber, 9 to 10c.; buckwheat, 8c. Extracted, white, 6c.; amber, 4 to 5c. A. B. WILLIAMS & CO.

San Francisco, April 6.—White comb, 8½ to 10c; amber, 6½ to 7½c. Extracted, white, 5½c.; light amber, 4¾ to 5¼c. Beeswax, 24 to 27c

A ship sailing this week for Hamburg took 316 cases. Sellers are not nearly so numerous as early in the season, and are inclined to be quite exacting at present in the matter of prices. Market is strong for comb and extracted, with supplies of latter light and stocks of comb showing steady decrease. The firmness is based mainly on the poor prospects for coming crop.

Detroit, March 22.—Fancy white is lower and now quoted at 11c. No. 1, 9@10c; fancy dark, 7@8c; No. 1 dark, 6@7c. Extracted, white, 5@6c; dark, 4@5c. Beeswax in good demand at 26@27c.

There is considerable dark and undesirable honey on commission now, and some of it will be carried over to another season.
M. H. HUNT.

Minneapolis, Mar 18.—Honey much more encouraging. Fancy white clover comb is selling here now at 10½@11½c. Not advisable to ship darker than amber. Extracted fancy white clover, 5½@6c; amber, 5c; dark, 4@4½c.

Outlook for honey much more encouraging.
S. H. HALL & CO.

Indianapolis, March 24.—Fancy white, 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand. WALTER S. POUDER.

Milwaukee, March 8.—Fancy, 11 to 12c.; A No 1, 10 to 11c.; No. 1, 10 to 10½c.; No. 2, 9 to 10c.; amber and dark, 7 to 8c. Extracted, in barrels, kegs and cans, white, 5 to 6c.; dark, 4½ to 5c. Beeswax, 25 to 27c.

We are able to report an improved demand for fancy honey during the past few days, while the medium grades have also sold better, yet the surest sale is on the BEST. The supply continues equal to the demand, but the fancy grades are not in as good supply as the low and medium, which goes to prove that the fancy sells best—and the values better
A. V. BISHOP & CO.

Buffalo, March 11.—There is a good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

DR. PEIRO,
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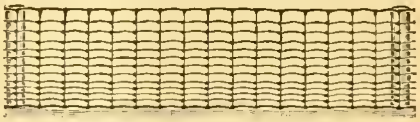
Catalog Free **A. I. Root & Co's Goods** for Missouri and other points, to be had at factory prices from **John Nebel & Son, High Hill, Missouri.** 9Atf



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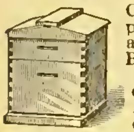

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Cash for Beeswax. BELL BRANCH, MICH.

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Because it has always given better satisfaction than any other.
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38th Year. CHICAGO, ILL., MAY 12, 1898. No. 19.

CONTRIBUTED ARTICLES

CHARACTERISTICS OF FOUL BROOD.

Exactly How to Detect It; and Also Exactly How to Get Rid of the Disease.

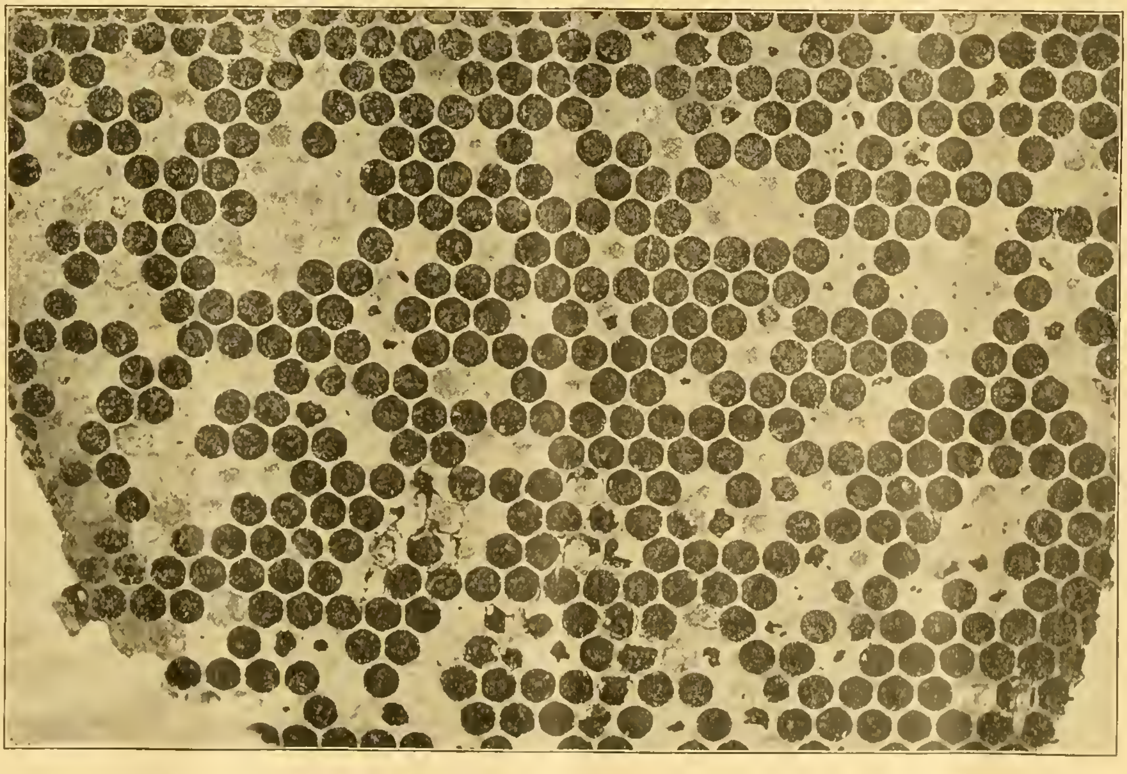
BY HON. R. L. TAYLOR.

Late Superintendent of Michigan Experiment Apiary.

Where foul brood exists or where its existence is suspected it is of prime importance that one have the ability to distinguish it with certainty from every other disease or injury. Some degree of practical experience with the disease will alone make one adept in discovering and identifying it, yet its peculiarities are so pronounced that no one having good eyes and nose, and giving attention, need be in any doubt in regard to its presence.

The one crucial test is the color and consistency of the dead larvæ affected with the disease before it dries up. At this stage the matter of the dead larvæ is always viscid or ropy like mucus. There is no foul brood without this characteristic, and I may safely say that with this characteristic there is always foul brood. This last statement, however, requires explanation.

In my experience of ten years with the disease I conclude that in a few years it spends its force and loses its vitality in a given locality, while it continues to retain in the matter of the larvæ in a considerable degree the viscid character. In such case there is likely to be found but few affected larvæ in any colony, and with a little experience and care the two conditions are readily distinguisht, and in this way: In the weakened stage the dead matter is slightly less viscid, but a better test is that it is *paler in color.* The dead matter in the larvæ affected with this disease in its vigor is of the color of coffee when prepared for drinking by the addition of a moderate amount of milk. In the weakened stage of the disease the color is perceptibly lighter. To determine the consitency of the dead matter of larvæ, insert a sliver or a straw into it



A Comb Badly Infected with Foul Brood.—From a Photograph by Thos. Wm. Cowan.

and then withdraw it. If the matter pulls out in a string, adhering to the sliver, and is of the coffee-color described, it may be set down that foul brood is certainly present; but if it does not show this decided ropiness it is just as certain that there is no foul brood in that cell.

I just said there is no foul brood without ropiness, but this must not be taken *too* literally. That was said with reference to the stage during which the matter remains *soft*. After a few weeks the matter of each dead larvæ dries down and lies spread on the lower side—not the bottom—of the cell, a brownish-black scale of the thickness of a man's thumb-nail. This peculiarity is of great use in making a diagnosis of the disease at some seasons of the year, as in the fall or in the spring, in the combs of a colony which has perisht during the winter, as colonies affected with foul brood are very liable to do. Soon after the breeding season is over these scales are about the only evidence of the disease that remains in a strong colony, as the cappings of the diseased cells are apt to be cleared away, but in a weak colony the discolored, defective cappings largely remain. It seems to be beyond the power of the bees to remove these scales, so if foul brood has been present they remain to reveal it if one will take the proper course to discover them. This is best done in this way:

Take the comb by the top-bar and hold it so that a good light falls into the cells at an angle of about 70° or 80° from the top of the comb, while the sight falls upon the cells at an angle of about 45°. The scales if present will be readily discovered lying as already described reaching almost to the margin of the lower side of the cell. I consider this a very sure method of diagnosis, tho in one or two cases I have seen similar scales where the death of the brood resulted from other causes.

Other characteristics of the disease which are useful in aiding in its discovery are the peculiar odor and the appearance of the cappings of diseased cells; such cappings, while they vary in color, are generally darker than those of healthy cells, almost always sunken or flattened, often having irregular perforations of varying sizes, and the comb containing much of the disease presents altogether an unprosperous, sickly appearance. The odor is very unpleasant, and may be described as an "old smell," and is well said to be like that of a poor quality of glue when heated. If a colony is badly diseased the odor is sometimes felt on raising the cover of the hive, and generally on applying the nose to the top of the brood-combs.

If one handles the combs of his bees frequently, and keeps the subject of foul brood on his mind, what I have already said will enable him to discover the disease very soon after its appearance in his apiary, but if brood-combs are handled but little it is quite important, if one would insure himself in some degree against losses from the disease, that a strict watch be kept on the condition, in respect to disease, of all colonies that appear from external indications to be lacking in prosperity, and especially of colonies to which robbers seem to be attracted, for the odor of foul brood has an attraction to bees, seeming to indicate to them that the colony emitting it is about in a condition to permit its being robbed with impunity. And this not because colonies wanting in prosperity are more likely to contract the disease, but because this condition may be the result of disease. If the disease is once discovered to be present, then it would be the part of wisdom to examine each colony carefully under strict regulation against robbing.

The cure of foul brood is difficult only because it is difficult to discover the disease in its incipient stages in every colony, and to determine every colony in which are germs of disease lying dormant ready to develop when favorable conditions are present, it may be after many months. And when the disease is disseminated among the bees in the neighborhood, especially among wild bees, a final cure may be the work of years, but with care, even under the worst circumstances, it may be kept in such subjection that the injury therefrom will not be great, and under favorable circumstances it may be quickly exterminated.

The cure of any particular colony is very simple and certain, the cautions to be observed having to do with preventing the access of bees from healthy colonies to the diseased combs, since such access would almost certainly spread the disease to other colonies. To preclude this danger all the necessary operations must be performed when no bees are flying, or when the pasturage offers so much nectar that there is no disposition to rob. These conditions being secured, take a hive externally as nearly like the one containing the diseased colony as possible, and having moved the hive with the colony to one side, place the new hive furnisht with foundation or starters on the old stand, then run the bees into the new hive by shaking or driving. This is all that is necessary for the cure of the colony if nectar is coming in somewhat freely. If nectar is scarce or absent, absconding must be guarded against and feeding resorted to. Without being certain that it is necessary, I advise feeding scantily for four or five days, and after that as plentifully as desired. From this it will be seen that it is preferable to attend to the cure during a honey-flow.

The plan insisted on by some that the colony be shaken out into still another hive after being allowed to build comb for four days I have proved in a hundred cases without a single failure to be entirely unnecessary.

I wish here to put in a word of caution against the placing of any reliance upon drugs for curing this disease. My earliest experience was with 30 diseased colonies upon which I tried the use of drugs thoroughly. I repeated its use upon other colonies later, sometimes with extreme care, but with entire failure in every case.

Sometimes when the disease is discovered in its early stages there are large amounts of healthy brood in colonies that are to be treated, and the disposal of this is a problem that deserves consideration. Sometimes such colonies cast swarms in the swarming season. In such case I hive the swarm on foundation or on frames with starters, always avoiding combs for that purpose. Then in three weeks I shake out the bees from the old hive according to the directions already given.

Other colonies that are fit to swarm during the swarming season but not disposed to do so I compel to swarm, *i. e.*, I shake out a swarm and then treat both old colonies and swarms as in case the swarms were natural ones. With weaker colonies and at other seasons this course is not always practical. Under such circumstances, if there are several colonies it is sometimes convenient to shake out all but one or two and give all the brood to that one or two, which are to be treated three weeks later. If there is but one colony it may sometimes be desirable to cage the queen for three weeks—but not often—it is generally better to sacrifice the brood and give the colony a new start.

If colonies have become greatly reduced in strength by the disease, as the bees are mostly aged under such circumstances, it is advisable either to unite or destroy them, but in doing this extreme care is necessary to prevent the escape of any of the bees into hives containing healthy colonies.

I have already intimated that the chief difficulty in effecting a final cure is the existence of the disease among neighboring bees, especially among wild bees. The reason of this is that the spread of the disease is owing principally, if not wholly, to the visiting of diseased combs by bees from healthy colonies—or, in other words, by the robbing of diseased colonies, and if there is any other way of contracting the disease it is because there are other ways by which the germs of foul brood may get into hives of healthy bees. If one considers that diseased colonies in the woods or belonging to careless neighbors are sure in time to fall a prey to healthy colonies, the serious nature of the difficulty is readily appreciated. This consideration also indicates the extreme care that should be used to prevent robbing in a locality where the disease is known to exist, as well as the care that must be given to secure from bees the combs and honey taken from diseased colonies. Their immediate and complete destruction by fire would be the safest course for many to pursue, but the honey and wax are sometimes of considerable value, and this extreme course need not be pursued if one is careful and has proper conveniences for disposing of the honey and comb.

When there is but little honey in the combs it is best to boil the combs at once and secure the wax. If there is honey which it is desired to save, first cut out all parts of the comb containing brood and boil or burn them, then extract the honey, which may be used for the table or boiled with one or two parts of water and used as food for the bees. Boil at least 15 minutes. The comb must then be boiled and the wax secured. Or if the honey is only desired to feed the bees, the combs, honey and all may be boiled in just the amount of water necessary and the bee-food and wax secured at the same time, and with less labor and trouble. It is to be borne in mind that all honey from these combs is dangerous for bees unless it is thoroughly boiled.

Not a few, I fear, will exclaim at my intimation a little ago, that foul brood could only come from foul-brood germs, and begin to assert that it can come equally well from brood that has been chilled to death. In Virgil's time swarms of bees were bred from the carcass of an ox; when good Izaak Walton lived the fish called the pike bred from pike-weed; lately chess grew from wheat, and now foul brood grows from something else!

Well, bees, and fish, and chess, have *now* come to increase normally, and if foul brood has not yet, it very soon will.

No, it is still true that men do not gather grapes of thorns nor figs of thistles.—Bee-Keepers' Review.

Higher or Lower Elevation for an Apiary.

BY PETER J. SCHARTZ.

On page 54, "Maine" asks Dr. Miller if an apiary located on quite an elevation has as good a chance to secure a crop of honey as an apiary not elevated. I say yes, for this is exactly how my apiary is located. My bees are located on the top of a hill, and I, like "Maine," secure good crops of honey, and sometimes more than my neighbor bee-keepers who are located on low ground. I will tell as nearly as I can why I have my bees on high ground.

This hill faces east; directly opposite is another hill facing west; between these two hills is a valley where we keep our stock, and our barns are located there. Our dwelling houses are built on the hill, and more favorably speaking the most of Cook county is on the hill.

I see no difference in the bees, nor do I have any trouble in keeping up the strength of my colonies. In fact, my bees are better on this elevated ground than they would be on lower ground, for the reason that the thermometer will register 20° more in this valley than it will on this elevation, so you see that it is decidedly in favor of the bees.

Bees never fly out on this high ground when it is too cold for them, but if they were below the sun would soon warm them up, and out they come never to return. I tried it once with a single colony, and will never do so again if it can be avoided. What a shame to see the poor bees come out of their hive and scattered everywhere, too much chilled ever to return again. It made me feel as if I could pick up hive, bees and all and carry them up these 17 flights of stairs and set them down alongside their comrades. That settled the experiment for me.

Spring dwindling I know nothing of, nor have I lost more than two colonies in wintering in all these six years. They are always wintered on the summer stands with but scant protection (while the north wind blows them full in the face), and there they are in the spring safe and sound, unless they have walkt off with two (in)human legs under them. Some of the hives have from 12 to 16 Langstroth frames each.

This is my experience, and if "Maine" doubts this, let him or her try low ground with one colony and be convinced.

Cook Co., Ill.

Spreading Foul Brood Among Bees.

BY PROF. A. J. COOK.

Mr. Jas. T. Lisonbee, of Maricopa Co., Ariz., asks me to answer the following question:

> "Is there any danger of spreading foul brood by the use of the watering-trough as described on pages 204 and 395 of the American Bee Journal for 1897, which is, in short, a plank with holes bored in it and grooves cut to connect the same? Cheshire speaks of bees carrying the disease on their feet from a diseased colony to a healthy one. If you will answer, you will oblige me and others."
>
> J. T. LISONBEE.

As this is a question of general interest I am glad to reply through the American Bee Journal.

In case of these microbe or germ diseases, there is so much yet to be learned that we may not any of us speak with overmuch confidence. Yet no science of to-day is receiving more close attention and hard study than this one of Bacteriology. And we are fast becoming acquainted with facts that bid fair to become of vast practical importance.

It is true that the late Mr. Cheshire believed that foul-brood germs could be and were carried by the bees. If I remember correctly (I have not his work at hand) he also believed that the germs were not carried in honey. Mr. Cheshire did excellent service in his study of foul-brood germs, and discovered important facts, but I think experience and the consensus of opinion among our most intelligent and best informed bee-keepers would not agree with him in either of the above positions. Owing to the minute size of these lowest vegetable or plant germs, it is not easy to demonstrate the facts regarding their life history.

That bees do not carry the disease-germs to flowers, watering-troughs, etc., or that if they do the germs are impotent to develop seems obvious from the fact that the disease spreads so slowly from apiary to apiary and from colony to colony in the same apiary. With a little care on the part of the apiarist, as shown by Hon. R. L. Taylor, of Michigan, foul brood may be kept in certain colonies for days and weeks, and yet no signs of it appear in other colonies close along side. If the bees of the affected colonies carried the germs as they went out to flower or pool, surely the disease would be sown broadcast, and all the bees in the region would very soon show the malady, and become doomed.

That the germs are in the honey is a generally accepted theory, as no other seems to explain the spread of the disease, as it very often occurs. I think Mr. A. I. Root, if my memory serves me, thinks his bees were inoculated through honey that leakt out at the depot.

It is now known that many microbes are speedily killed by exposure to sunlight, while sunshine is almost immediate death to these minute germs. The germs of consumption or tuberculosis are said to be quickly killed by sunlight, while the full blaze of the sun is immediate death to these terrible microbes. Thus a flood of sunlight, and better, sunshine, is the best disinfectant of a house that harbors a consumptive. Even then if Cheshire was correct in the belief that the germs were carried by the bees, we may have in the sunshine such an effective fungicide or germicide that the germs are killed before they are conducted to the hive and placed in a nidus suitable for their growth, development and multiplication.

The answer, then, which I would give to Mr. Lisonbee, would be that there is little if any danger of foul brood being communicated from a watering-trough visited by bees from a diseased colony. I believe the same would be true regarding transmission of the germs through the visits of the bees to the flowers. I think it is generally conceded that foul-brood germs are not transmitted in wax, and so foundation from comb that has harbored the disease-germs is entirely safe to use.

If the sunlight theory of destruction is true, then probably honey from a foul-broody colony would not be likely to bear the fatal germs. It may be possible that the immersion in the honey would protect against the sunlight, or tend to do so. It is presumable that the visits of robber-bees to diseased colonies, which are from their very depletion through the effect of the microbes specially liable to attack, are generally responsible for the spread of the malady.

I should like very much to hear from Mr. Taylor regarding the spread of the disease. From his long experience and close and most intelligent observation, I think he would be able to give some specially valuable hints.

Los Angeles Co., Calif.

The Bee-Industry in Arizona.

BY B. A. HODSELL.

The name Arizona recalls the many blood-thirsty battles with Apache Indians, the stage-robber, of men dying for want of water, of cactus and barren desert. Of course, when a sensational story is written they must locate it some place, and it appears that Arizona has been imposed upon. It may be of interest to know that the Salt and Gila valleys alone shipt 29 carloads of honey to Eastern markets in a single year, besides a large home consumption.

My experience in bee-keeping commenced back in Ohio, 25 years ago, and many were the losses from drouth and cold winters. Here it is pleasant to keep bees. There is scarcely a day that they do not fly. There is no place in the United States that we look on as competitors, except Southern California, of which this is an inland valley. First in season are cottonwood buds, which furnish an abundance of pollen by Feb. 10, followed by agua motas, yielding both pollen and honey. Then come greasewood blossoms and a sea of desert flowers.

Bees commence swarming by March 15. Next comes the honey crop from mesquite, catclaw, ironwood, which extends into the alfalfa season, which begins about April 15, and continues until about Nov. 1.

In the fall bees gather honey from wild poppies, sunflowers and other desert flowers.

The bees here are nearly all hybrids or full Italians. Nearly all of our bee-keepers are members of two associations, through which they buy their supplies and ship their honey in carload lots.

We produce extracted honey almost exclusively. The yield ranges from 50 to 200 pounds per colony a year.

The country is thoroughly watcht for bee-locations, and is generally stockt, averaging about one colony to each acre of alfalfa. In order to secure suitable locations for a number of out-apiaries, I have them scattered 40 miles from home.

In my searches for out-apiaries I found a beautiful valley along the Gila river, near a railroad, surrounded by mesquite and desert flowers in season. Large herds of fat cattle were on the range in midwinter. Several farmers have built an irrigating canal and irrigate about six sections of the very best of valley land.

A quarrel over a drove of hogs arose between those who had the most means. The time spent at law would have filled the canal with water. Each one declares he will rule or leave, and the result is, no water in the canal.

Well-improved farms are offered for much less than the cost of improvements. With proper care the 7,000 acres might just as well be seeded in alfalfa, which would support 7,000 colonies of bees, and cattle at the rate of two head per acre a year, and as many more on the range. All that is needed is a few farmers with some capital that would get along better together, as the bee-keepers are doing in the valley of the Salt.

Bee-keepers of Arizona are up-to-date and wide awake, using the latest and best hives, extractors and all modern improvements. Last, but not least, they read bee-papers and keep themselves informed. Maricopa Co., Ariz.

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Strange Homes Selected by Bees.

BY H. A. FISH.

It is written in bee-books that the honey-bee likes no place for a home that does not smell "clean and sweet." Just fancy a swarm taking possession of an empty fish-barrel, using the bung-hole for an entrance, and doing just as much business as if they were in a fancy hive!

As queer a case as I ever saw was where they pre-empted a pigeon-cote that was made from a "Welcome soap-box." A roof had been put on it, and two entrances cut in the side, and over it there was printed "Welcome." The "soap" part had been obliterated by the use of the saw. Perhaps it was the sign over the door that caused this swarm to take possession of this place. It could not have been the smell of those pigeon-droppings. And as for other visitors, they were *not welcome*, as I can testify. They still live in the old home, and have plenty of ventilation, which may account for their staying. Runaway swarms can't always choose just the best hive.

I bought a Carniolan queen and put her into a nucleus colony, and she was such a prolific queen that in a very short time the hive was full of bees. On opening the hive one afternoon I found no queen, but several queen-cells. I concluded she had gone back to her former home, but a neighbor told me that he had a swarm come into one of the chambers of his home and clustered on the ceiling. I askt him what he did with them, thinking of my dollar queen. He informed me that he just got a wide board and "*squtcht*" the whole business.

One of my neighbors had a swarm go into one of the flues of his chimney, and he got a man to try to get them out, but he discovered that this particular flue had been stopt up some time, and the bees had to go down the other flue and go through a chink to get into the stopt-up flue. The owner of the house thus discovered *why* that flue would never draw.

Old box-hives left around in the woods often will be taken up by runaway swarms. I have gotten several that way.

I used to hunt wild bees, and often found them in places where I did not expect to. An old bee-hunter up in New Hampshire told me of a swarm he found the past summer in a tree, and it was markt with the name of the man who first found it, altho the date was 18 years ago. One would suppose that these bees had been in there all these years, but probably they had died out several times, tho the first man says those he found were Italians, and the last man says the ones he found were Italians, too. He believes they have lived there all these years.

I think this will do for the present. If some one doesn't try to tell a larger one, I'll tell of some other bee-trees later on. Plymouth Co., Mass.

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for $1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at $1.00), and 10 cents extra.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

CONVENTION PROCEEDINGS

Proceedings of the Colorado State Convention.

REPORTED BY F. L. THOMPSON.

[Continued from page 278.]

BEES LIQUEFYING GRANULATED HONEY.

A question on the best method of feeding outside of the hive was askt, which led to the following remarks:

Mrs. Rhodes—To get the bees to liquefy honey in the hives I set a pan of water with corncobs in it close to the hive. I never see granulated honey on the bottom-board when water is close.

Pres. Aikin—I had thought of feeding very thin honey for this, so as to get it stored over the granulated honey. I suspect the bees often liquefy by bringing water; but we lose a great deal in the granulated honey which is carried away from the hive by the bees.

Mrs. Rhodes—They liquefy as much as they need.

TRAPPING MOTHS—STIMULATIVE FEEDING.

A question was askt about trapping moths, by a bee-keeper who had kept bees many years ago in the East.

Pres. Aikin—I have come across a good many Colorado apiarists who have never seen a wax-moth. There is a grain-moth here. The larva is nearly like that of a coddling-moth. It works on pollen or old black combs. It will cut holes in the comb, but not to eat the wax. The real wax-moth of Iowa has a larva several times larger than that of the grain-moth. It has two broods annually, one in April and the other in August. There is also a dark kind in Iowa, smaller and less numerous than the gray species, which works in the same way. The real wax-moths fairly riddle the combs.

Mr. Foster—Strong Italian colonies take care of them.

F. Rauchfuss—Emphasize *Italians*. I have seen strong colonies of black bees, brought here from Arkansas, make no objection to our moths.

QUES.—Will it pay to feed in spring to stimulate?

Pres. Aikin—I have done a big lot of feeding. I don't know whether it pays or not. It does if the colonies are short of stores. A large amount of unsealed honey next the brood has a great influence in building up. But if the bees gather enough from the fields feeding is not necessary.

Mrs. Rhodes—I know feeding pays. One spring we fed several pounds of sugar a week. It proved to be a poor season, but we got 1,000 pounds when our neighbors got nothing. Our bees built up and theirs did not.

Mr. Foster—I use a bottom-board for feeding, which I place on top, with the bee-space strips up. In this is bored a ½ or ¾ inch hole, covered with a lath when not in use, and a pint of honey is poured on the board. This is covered with another board. In this way I feed 20 or 30 colonies in a short time.

BEES RENEWING THE COMBS.

F. Rauchfuss—How many have noticed bees renewing their old combs in the middle of summer? [Two.]

Mr. Adams—I have seen this in the spring, but not in summer.

Pres. Aikin—I have seen many colonies renew their brood-combs. The question how long brood-combs can be used is sometimes brought up in the bee-papers. If the writers had observed, they would not have brought it up.

F. Rauchfuss—Have you observed under what conditions it takes place?

Pres. Aikin—No.

F. Rauchfuss—I once noticed a lot of refuse in front of a hive, like the refuse which a mouse makes by gnawing the combs. I inspected, and found the colony queenless. The bees took advantage of a time when there was no brood in the way. Since then I have always noticed this in colonies queenless or made queenless. A neighbor bee-keeper last summer noticed it in six colonies at once, all of which he had dequeened.

Pres. Aikin—So far as I can remember the cases the colonies were always queenless.

F. Rauchfuss—This has never been mentioned in any bee-literature that I know of. We have two writers for the bee-papers present. They ought to bring it up.

WATER-TIGHT HIVE-COVERS—SUPER COVER.

Mr. Varian—What is the simplest way to make hive-covers water-tight. I have used paint, with a painted cotton-cloth over the painted cover.

Mr. Adams—It is not reliable. I am using elaterite—a white cloth filled with a new Utah mineral.

QUES.—What do you use for a blanket in covering supers during the flow?

Mr. Foster—I use nothing but a board.

Mr. Lyon—I like an oil-cloth as well as anything.

Pres. Aikin—How do you keep it down?

Mr. Lyon—That is a bad feature.

Mrs. Rhodes—On extracting-frames we use burlap. When it is raised we run a warm smoothing-iron over it.

Mr. Adams—I use brick to hold the oil-cloth down.

Mr. Lyon—I use several thicknesses of burlap over the oil-cloth. It helps to some extent.

Pres. Aikin—I used much muslin, but the bees stuck in a great deal of propolis. When I came to Colorado I made 20 inner board covers for use with Simplicity covers. On comparing the sections over which they had been used, with the remainder which had been under muslin, my employer had me make inner board covers for all the hives the next season.

Mr. Lyon—I have 100 of those inner covers which are all warpt out of shape. Probably they were not properly cleated. I used them in winter. Perhaps that warpt them.

Mr. Elliott—Don't the bees discolor the tops of the sections when there is a bee space above?

Pres. Aikin—A little discoloration does not hurt for ordinary grades of honey. One is almost obliged to have a double cover when the hives stand in the sun.

Mr. Elliott—I used one thickness of muslin. The trouble was the propolis on top of the sections.

Mr. Thompson—Last season I used a good deal of paraffine paper. It was applied strictly according to instructions, with several layers of old newspapers, and thin boards over that. The paper was so well cushioned that no propolis was deposited on the tops of the sections. But thick lines of propolis were deposited on the paper adjoining the junction of the paper and the wood, thus rendering the paper useless after being used twice, once on each side; for I do not know of any practical way of cleaning it off. Then the application and renewal of the paper in a large apiary is extremely wasteful of time. I notice that Mr. Danzenbaker says in Gleanings that nothing but pure wax was deposited on the paper by his bees, which wax was easily removed by scraping with a piece of section. Perhaps the reason is, that his localities are in the South. Another correspondent of Gleanings, who was successful with the paraffine paper, lives in North Carolina. Here in Colorado our nights in the last half of the season are cold. But whatever the reason is, it is certain that propolis, not wax, is deposited here, even when the paper is well cushioned and warm. Because of the expense and the fussiness I do not want to use it again; but the tops of the sections were certainly kept bright and fresh by its use, free from the dinginess that Mr. Elliott refers to.

Pres. Aikin—For a strictly fancy grade it may pay to cover the tops of the sections. But in ordinary grades the customer doesn't care.

F. Rauchfuss—For ordinary dovetailed hives there is no provision made for an inner cover, and it involves some expense to have a proper cover made. With a single cover, even painted white, I have known sections to be melted down. I have not known it to happen when an oil-cloth was under the cover. A single cover alone is sealed tight; a cover with an oil-cloth gets ventilation between.

Pres. Aikin—When a shade-board is used sections under single covers alone do not melt down.

Mr. Lyon—Isn't there quite a difference between a board and a blanket in retaining heat, just at the beginning?

Pres. Aikin—Yes, until the board is sealed all around by the bees. But if there are enough bees to block the entrance they will regulate the heat by stopping the draft.

Mr. Lyon—Do you like a small entrance in the breeding-season?

Pres. Aikin—Yes, when the colonies are weak.

Mr. Lyon—Do you like an oil-cloth in winter?

Pres. Aikin—No. Moisture accumulates. When the temperature is high it doesn't make any difference.

Mr. Lyon—I know a man whose hive-covers were sealed tight. The bottom-boards and the combs were damp and moldy, in just such weather as we are having now (moderate). If the colonies had not been examined they would have been ruined entirely.

Pres. Aikin—I think we lose a great deal by moisture. I have claimed for years that upward ventilation is needed to carry it off. Bees can stand a great deal of cold without moisture. The majority of those who make a success of cellar-wintering leave off tops or bottoms, or both, or maintain a high degree of temperature. The great trouble of cellar-wintering is diarrhea. Tell me how to prevent diarrhea and I will tell you how to winter bees. Since I came to Colorado I have formed the opinion that moisture is one of the principal factors in causing diarrhea, both directly and also by water condensing in the honey and souring it. Bees dry themselves by licking each other off. Where does that go to, which they thus take up?

F. Rauchfuss—We have had diarrhea in a cellar without moisture. We had two lots of bees in our cellar both alike. One was from the home yard, and the other brought from Harman. Our cellar was very dry. The bees from Harman were pretty nearly gone up in February, and we had to put them out. Those from the home yard, which had been in the lower part of the cellar, usually considered the most disadvantageous place, were all right, and were left in until May. The cause was probably in their food. The Harman bees had only cleome honey; the others only alfalfa honey.

Pres. Aikin—Why, you have upset my argument. But I hold that moisture is a large element in causing diarrhea.

F. Rauchfuss—The temperature of the cellar was uniform, not varying more than 5°.

SECOND DAY.

THE RIPENING OF EXTRACTED HONEY.

Mr. Foster—I came from Iowa but two months ago. Most of you have heard of Oliver Foster. He is a brother of mine. I have workt near him for years. To get a good article we let the honey get thoroughly ripened before extracting. From the standpoint of Iowa work, this is when the combs are two-thirds or three-fourths capt.

Mr. Pease—Do you ever ripen honey after extracting?

Mr. Foster—We never thought it necessary.

F. Rauchfuss—We tried ripening extracted honey once because we didn't have the extra combs, and had to extract soon. Otherwise it is not advisable to practice artificial ripening because the bees can ripen honey much cheaper than you can. Last year we had a great many combs, too many in fact, but they come in handy in good seasons. Practically all our crop was stored before extracting commenced.

Mr. Geo. W. Mischke, representing the authorities of the Trans-Mississippi and International Exhibition at Omaha, then addrest the convention. The exhibition will be an assured success, as all other Western States have made appropriations. The Colorado legislature did not make an appropriation, but the matter is left with the County Commissioners of the several counties. A State Commission is responsible for the return of all exhibits of an imperishable nature not donated. The Arkansas valley and Grand Junction districts are taking active measures for exhibits, so that Colorado will have a good exhibit.

All present seemed to be heartily in favor of making an exhibit, providing we get the "wherewith" to do it.

Mr. H. Rauchfuss next read the following paper on

Management of Swarming.

I believe better results can be obtained by preventing swarming than by allowing natural swarming. With the latter management some one has to be with the bees most of the time to hive the swarms. We might use entrance-guards or queen-traps; but they do not work as well as one might think, especially in a large yard. To make bee-keeping on a large scale profitable, one has to handle bees in more than one yard with little or no help. Without some sure way to prevent swarming it cannot be profitably done in this location at the present low prices of honey.

I have practiced different methods. One was to introduce young laying queens before swarming-time. This was a success in preventing swarming and securing a surplus. I treated 45 colonies in that way. None swarmed that season. But it is too expensive to produce good laying queens before swarming in this locality.

Another plan was to give plenty of room and ventilation. Before the bees started queen-cells I gave them a brood-chamber with starters below their brood, then an extra super on top with a queeen-excluder between, then raised the hive one inch from the bottom-board in front. This experiment was a failure. Most of the colonies swarmed before filling the extracting super, and with very little comb built below the brood-chamber. This proved to me that room had very little to do with swarming. I have seen many colonies swarm when the outside combs in the brood-chamber were almost empty. I suppose the strain of the bees, the locality and the season have much to do with this.

Dividing or artificial swarming I have practiced for a number of years. In a prolonged season some of the colonies with the old queens will swarm late. Unqueening I have practiced on a large scale. The queens were removed at the commencement of the honey-flow, and all queen-cells cut out. Nine days after, all queen-cells were removed except one. This stopt all swarming, but many colonies were found queenless at the next inspection, and some colonies did not work satisfactorily as long as they were queenless.

Last year I tried requeening shortly before the honey-flow. I put the queen with two frames of brood above the queen-excluder in an extracting-super filled with empty combs. The vacancy whence I took the two frames was filled with brood and bees of certain other colonies, which were entirely used up for the purpose, so that I decreast the number of colonies 20 per cent. at that time. Nine days after I took the upper story with the old queen to a new stand, then cut out all the queen-cells of the one on the old stand, gave them a virgin queen three to six days old, and put on a super. The object of having the old queen above is to get all the brood in the lower brood-chamber sealed, and have some honey stored where the oldest brood has hatcht. This puts the lower part of the hive in a hopelessly queenless condition, without having the colony queenless. To get virgin queens of the proper age, queen-cells have to be started about one week before the old queen is put above, and the ripe cells are put in queen-nurseries, to be taken care of by a few colonies until wanted. My queen-nurseries are the size of a Langstroth frame, and will accommodate 34 colonies each. The cages can also be used for introducing-cages.

This management proved the most effective and profitable one I ever tried. Three operations completed the work of requeening. The only attention these colonies required was to supply supers and remove same when finisht. It will be seen that by this plan one man can handle several apiaries, as about one inspection every week during the honey-flow should be all that is necessary. H. RAUCHFUSS.

[Continued next week.]

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Disadvantage of Painting Hives.

What are the disadvantages of painted hives? The advantages are that they look better and last longer. One disadvantage I have seen stated, of white painting, is that they are more attractive to the moth-miller, and I have sometimes painted my hives other colors, but I like no other color as well as white. IOWA.

ANSWER.—Probably the chief disadvantage of paint on hive-bodies is that the paint does not allow the prompt drying out of the wood in spring. A large amount of moisture comes from the bees, and if the hive is painted this stays in the walls. It is perhaps best to have the cover painted, but not the body. It is hard to understand why moths should trouble white hives more than others, and if I should paint my hives at all, white would be the color.

Placing Hives—Question About Queen-Breeders.

1. On page 810 (1897) in answering a question concerning spacing hives, you mentioned that your hives were set in pairs; also, that you advised a questioner before to arrange his hives in that way. To the uninitiated it would seem that gaining more space was about the only reason for so doing, but there may be others. Will you give all the points which caused you to arrange in that way, and advised others to follow suit?

2. Queen-breeders, when testing queens, undoubtedly find a goodly number deficient in mating, one way or another. What do they do with those queens? I should like to know, as I am quite suspicious, and inclined to believe that they unload them on the unsophisticated buyer for untested ones. What is your opinion? Don't say "I don't know." CALIFORNIA.

ANSWERS.—1. If I had 10 acres of ground freely at my disposal, I think I would set my hives in pairs, and I think I would advise any one else to do so unless I should find a man that I hated worse than any one I've met yet, and I'd give him the same advice. I may not be able to give fully the reasons why I like the plan, but I suspect I can give enough to satisfy a reasonable man like yourself. In trying to think of an objection, the only one that occurs to me is that you can get at one side of the hive only, but I'm not sure that I care to get at more than one side. Yes, I remember a case in which it was bad to have hives sit so close. One time a colony was made queenless and broodless (I'm not sure but combless,) and in its desperate condition it marcht straight out of its own hive into the neighboring one. But in an apiary of 100 colonies I think that would not happen once in 30 years. Now for the advantages:

If I had 10 acres of ground for an apiary, I wouldn't want to spread the bees all over it, for I wouldn't want to travel over so much territory in going from one hive to another. Suppose there are 40 hives in a straight row, 10 feet to each hive, that is, the hives measure 10 feet from center to center. I would move them together in pairs, having the pairs measure 10 feet from center to center, thus occupying just half the ground they did before, and they will be just as safe as they were before, so far as concerns workers or queens getting into the wrong hive. Or, suppose the 40 hives are placed in a row five feet from center to center, I would leave Nos. 1, 3, 5, etc., right where they were, and I'd move Nos. 2, 4, 6, etc., up to them, thus having the same ground occupied as before moving, but there would be only half the danger that any bee would get into the wrong hive.

For bees are familiar with form, and if they're accustomed to go to a certain part of a hive as their entrance, they persistently stick to that part. Try this: This spring cover up or close the entrance to a hive half its width at the right hand side, and after a few weeks open that side and close the left. You'll find that it will trouble the bees no little to find the entrance. They'll persist in trying to get in at the side that was formerly open, and to which they are accustomed. Now, in the eyes of the bees it seems as tho that pair were a single object. They will not make the mistake of going to the right side when they should go to the left. That is, they'll not make the mistake of going into No. 16 instead of No. 15. If they make a mistake at all, it will rather be to go into No. 17 instead of No. 15, for No. 17 is at the same side of the pair as No. 15.

By having hives in pairs you need only half the number of stands. It will take more lumber to make a double stand, but not twice as much, and it will be less than half the trouble to level the stands. For it's easier to level a long stand than a short one.

2. I hinted a little while ago that you were a reasonable man. I take that back. I don't call any man reasonable that will ask a question and then bar out the only answer on hand that will fit. But I will say that an honest man would never sell as an untested queen one that he had learned was mismated. He would sell it for what it was, or keep it himself, or destroy it.

Sour Honey and Moldy Combs.

I had a colony of bees die about March 10. They left about 15 pounds of honey, and some of it that did not get capt over has soured, and some of the combs are moldy in spots. There was not a cell of brood in any of the combs.

1. Would the bees clean the mold and sour honey out of the combs?

2. Would the combs do just as they are to hive new swarms on? If not, why not? MICHIGAN.

ANSWER.—1. Yes, they'll fix them up all right, only don't give one colony too big a job at a time.

2. If they're pretty bad the swarm might desert. But you can let the bees clean them up beforehand, and then they'll be all right for a swarm. One reason against holding them as they are for a swarm is, that they would probably be getting worse all the time.

A Beginner's Laughable Experience in Wintering Bees.

On page 170 you request "Iowa" to report as to how he came out with his top ventilation. Well, I'm "Iowa," and as my church advocates an honest confession, I'll obey and try to give facts as nearly as I can come at them.

First, I'll say we haven't a live bee on the farm. I am a beginner with bees, have made a failure in my first attempt, but I'm in earnest when I say I will try again, for I'm in love with the bee, and think probably the next lot will be carried through the first winter at least. It's an old saying, we never know what a boy will do. And I will add, 'tis also hard to tell what an older person may do when he embarks in the bee-business. And I suppose you will say an old fool is the worst of fools (and I don't care if you do.)

Now, I smelt trouble, hence only one colony would I buy when the fever struck me. My better-half jokes me about so much bee-literature about the house, and not a bee alive on the place. I tell her and the kids that my failure afforded us an early feast of honey, otherwise we would have waited a long time for it.

Now, Doctor, Joe will give you the particulars in full as to that colony of bees, then if you can tell which mistake was the fatal one, I'll treat.

Last fall I gave a neighbor four Bryan dollars for a colony in an old-fashioned box 16x16 inches, and 24 high. I got them home all right and set up in the orchard. Well, I've wintered for 20 years on Webster County prairies, and I know something about the blizzards that this country is subject to. I have seen snow blockades here as early as October 16. I am a farmer, and ever since then I have governed myself as much as possible to be in readiness for winter, and you can judge I had the bees in the cellar in ample time. If it was the first of November, it wasn't any later.

Now, the women-folks objected to having bees put in the cellar, but we finally compromised by my agreeing to put screen over the entrance of the hive. The bottom was nailed tight to the hive. Our cellar has only entrance from the outside.

Well, for awhile bees appeared all right, by having the cellar door open through the day time, but finally it failed to quiet them, then I, Bowser-like, was ready to relieve them with a fresh idea I had hit upon. You see, I had my word out with the women that the bees were not to roam about the cellar. So I got a screen and screened in a portico from the alighting-board to the hive; I tore off the screen from the entrance, and let them out in the new portico, just for an airing! Well, of course you know what they did—died as fast as they rolled out—and I soon became convinced that at that rate they would soon be all dead—that something else must be done, and that immediately. So I plugged the holes, then wisht I had been raised with the aid of a father, and one that knew something about bees.

Well, the kids were all around me in the cellar—watching "Paw" fix the bees. Then they askt, when I shut the holes, what I was going to do; if the bees wouldn't die if kept in the hive, and all such questions.

Well, I called for a piece of screen, took the nails out of the top board, and removed the same very carefully, and slipt the screen over in its stead. My, Mr. Man, what a commotion there was in that "gum!" Then they got quiet and staid so to their end.

The "gum" was about two-thirds full of comb. Every time old Bowser (that's me) went in the cellar, he had to take a peek in to see how the little ones were. The top of the hive was usually slipt to one side, and a match or two lit to give light to see them. All appeared O. K. until shortly after the time I sent in for advice about getting bees out for the early flow of sap from maple trees, as you remember. Well, from then I noticed they did not gather as high up in the hive as usual, and I thought maybe they went below for warmth. Then I closed the top a little more, but they kept sinking.

Finally one sunshiny day the idea struck me they needed some sunshine. So I slipt them over by the door where the sun shone in about noon, and took off the top of the hive (now laugh, Doctor,) and gave them a sun bath for half an hour. But all for "nix;" they kept going until I soon became aware that Blunkey had monkeyed the bees, and that soon we would have what honey there was. So we did. There was 20 or 25 pounds in the hive, and I know they didn't die for the want of something to eat. My ignorance killed them. But I am considerably wiser.

I will buy three or four colonies in good, respectable hives in the spring, or as soon as they can be had when they are brought out for spring from the cellar.

I am going to try my best to learn something about bees, for I have a lot of husky big boys, and I am not needed in the fields, except occasionally to look after them. The bees will afford me lots of pleasure, as I believe it's a fine study, and only regret that I lived 47 years before taking a notion to them.

You can well understand why I was experimenting with top ventilation. Doctor, I couldn't get around it, as the bottom had about a dozen 10-penny nails in it.

Now, as I said in the beginning, if you can tell me which move was the fatal one, I'll treat.

I think the Bee Journal is a fine bee-paper, especially for those who know something about bees.

Now, I'll pound around, and eventually may get to know something about bees. Doesn't it beat all how ignorant some people are, and I one of the worst of the whole crowd? You may tell the readers of the Bee Journal that "Iowa" has satisfied himself that the bottom is the better place to ventilate, and that he will never—no, never—try the top again.

I would be pleased to know why it's best to have bees in darkness when in the cellar. I notice in my second communication, as to diarrhea, you advise the room to be dark when taking bees into the house.

My neighbor, who was seeking advice through me, says his bees are all right now. But say, Doctor, how can he tell?

Well, you must surely have plenty of patience to be doling out advice to such ones as I, and I will say I surely don't envy you your job, no matter what your pay may be.

We are having an unusually early spring. Our wheat was sowed 12 days ago. We will start the seeder on oats in the morning. There is ample moisture to start the crop, but the ground is dry below.

Many thanks for your kind advice. I hope you will lead us for years to come—at least long enough to see BlunkeyJoe get his eyes open on bees. IOWA, March 21.

P. S.—If you want to fan me about my ventilation, you are at liberty to do so.

ANSWER.—Your question as to which was the fatal mistake is too hard for me. I don't know. There were so many of them that you might as well draw cuts to find the fatal one. More likely it was a composite affair, the bees finally laughing themselves to death at the many different changes.

For your guidance in the future, it may be well to note some of the points that would help to bring about the final outcome. Nov. I might do some years to cellar bees, but hardly last winter. There was a good chance for them to fly three weeks later, and they had three weeks unnecessary confinement, and long enough confinement without anything else is sure death. All the worse if the weather is warm after they are put in. Supposing they would have barely come through all right by being cellared three weeks later (as mine were,) that extra three weeks' confinement would be enough to kill them.

Screening them in, either with or without the portico, might make all the difference between success and failure. If a bee wants to leave the hive, screening it in will only make it stir up a lot of others, and it would be better to let the one out to die than to have it die in the hive and a lot more with it. Bees that are all right will stay quietly in the hive without any screening.

In some cases it may do to have light streaming into the cellar, when they are all right otherwise and the temperature right, but generally the admission of light will make them come out of the hive and die. Your cellar had its door open a number of days, and that was probably pretty hard on them. If it's necessary to have the cellar door open, let it be at night.

The frequent disturbance from opening the hive helpt no doubt to shorten life.

Top ventilation may be just as good as any. Given a cellar at proper temperature, about 45°, or at whatever temperature the bees keep perfectly quiet, with air perfectly pure, and it doesn't matter a pin whether the ventilation is bottom, top or side, so there's enough of it.

After all, you didn't come out so badly. You got $2 worth of honey, making the cost of the bees only $2, and if you didn't have $2 worth of fun you don't price fun high enough by the pound.

Questions on Queen-Rearing.

1. Suppose at the height of the season you took away all brood except one frame with the queen, inserting in its place empty combs. Then 48 hours after, take away the remaining frame of brood, queen and all. What kind of queens would you get?

2. Or, suppose you inserted in the middle of, say, six different hives, one empty frame of comb each, and at the end of 48 hours placed them in a populous colony that had been deprived of its queen and brood. NEBRASKA.

ANSWERS.—1. After scratching my head over that question, I'm rather inclined to reply that you'd get just about the same kind of queens you'd get if you took away the queen in the first place, leaving all the brood and bees. One disadvantage would be that it would take three or four days longer. Probably your thought is that you'd be sure of having queens reared from the egg—and so you would. But I don't believe it would be any better, if quite as good, to start with an egg laid to-day, as compared with a larva hatcht out of the egg to-day, and I don't know that a larva just hatcht has any advantage over one three days old, for the best authorities tell us that the food given to the worker-larva during the first three days is just the same as that fed to queen-larva. When a queen is taken away from a colony in the height of the season, there are eggs and larvæ of all ages present. Now, doesn't it look rather reasonable to you that the bees will select what will make the best queens if you leave it entirely to them?

2. In this case you'd have six different kinds of stock to breed from, and it would be a little better to breed from the best stock. Otherwise there would probably be no advantage over the plan first proposed. But there's no law against your trying it.

Transferring Bees—The Albinos.

1. I have a few colonies of bees in nearly as many different varieties of hives, all movable frames except one, which is a box-hive. I wish to transfer them into uniform hives. What I wish to know is, when is the best time to transfer so as to interfere least with brood-rearing and honey-collecting?

2. I intend to transfer by the "Heddon method." Does this method work equally well with movable-frame hives as it does with box-hives?

3. Kindly give a brief account of "Albino" bees and their relative value. AMATEUR.

ANSWERS.—1. The favorite time for transferring early is when fruit-trees are in bloom. But many prefer, especially when the bees are in box-hives, to wait until the bees swarm, then transfer three weeks later.

2. Just as well. But when bees are to be transferred from one frame hive to another, it ought not to be a hard matter—certainly not a hard matter in some cases—just to cut the combs out of one frame and put them into another. It is much easier than transferring from box-hives. In fruit-bloom is a good time for it. If the new frame is larger than the old one, it's easy to fill in a little by cutting up one of the combs for that purpose. If the new frame is smaller, it's easy to cut the comb down to the right size. If the old frame is smaller than the new one, it may work well to leave a top, bottom or end bar of the old frame attacht to the comb so as to make it the right size.

3. An albino bee, like an albino man, is one in which there is a deficiency of coloring-matter, making them lighter colored. The general rule is that an albino of any kind is, to say the least, no stronger for the change. Of late there has been little said about albino bees, and perhaps not a great many think them an improvement.

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

☞ See "Bee-Keeper's Guide" offer on page 300

AMERICAN
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Foul Brood.—It is just possible that some may question the wisdom of taking up space to copy the article on foul brood in this number, taken from the Review, and written by Hon. R. L. Taylor. There is nothing strikingly original in the article, and yet it would be difficult to find in the same space anything so instructive and complete that has ever been written upon the subject of foul brood. Some of the readers of these pages may not be interested in foul brood. Their bees are free from the disease, and there is no expectation that they will ever be affected by it. Therefore, there is no need of their reading up foul brood until they have practical need of the knowledge. The bee-keeper who thinks in that way is making a serious mistake. If he has no need of that knowledge now, there is no certainty he may not need it within a twelvemonth. *Every* bee-keeper should be familiar enough with the matter that he can easily spot the disease on its first appearance. After it has made headway it is a very difficult thing to handle it. Many a case occurs in which the bee-keeper hardly suspects the presence of the disease until one or more colonies are rotten past redemption, and the seeds of foul brood have been planted in every colony in the yard. The proper knowledge in advance might have nipt the thing in the bud.

Let every beginner, especially, not only read but carefully study that part of Mr. Taylor's able article which treats of the detection of the disease.

We wish here to acknowledge our indebtedness to the Review for the use of the splendid illustration on the first page of this number. It has been said by those who have had much experience with the foul brood disease, that they could almost *smell* its offensive odor by just looking at that "life-like" picture of an infected comb.

Crooked Honey-Dealers.—On page 120 we replied to "A Few Kicks and Growls," one of which referred to the guarded way in which we as publishers point out fraudulent honey-dealers. We replied that on account of certain existing libel laws we had to be careful, and "cannot publish all we would, sometimes." After copying a portion of the editorial in question, Gleanings had this to say in corroboration of our statement:

> Mr. York has hit the nail on the head. Unfortunately we as publishers cannot even tell the truth in regard to what is morally certain is truth, unless we can prove the truth by affidavits or other undeniable facts. For instance, I may know positively, in my own mind, that a saloon-keeper is selling liquor illegally; but to *prove* it would be another thing. I may be pretty well satisfied that a commission-house is tricky and dishonest; but to come out broadly with the statement might render us liable for heavy damages in a libel suit, for the reason that we might not be able to produce the evidence necessary to satisfy the jury or the court before whom the case might be tired. So the next best thing we can do is to "hint at or tell on dishonest commission-men" in a general way. And very often this is all that is necessary. For instance, a snide house may have a very plausible and apparently honest appearance; but a bee-journal can often uncover the swindling schemes they are about to launch forth, *i. e.*, how the wolf has put on sheep's clothing. Whenever the honest (?) old ram comes around, bee-keepers will be able to recognize at once the "true inwardness" of the "baste," whether under the name of A, B, C & Co. or X, Y, Z & Co.
>
> Sometimes we get hold of enough proof that is strong enough to warrant us in giving names and particulars, but more often not. Most of the dishonest rascals are just "slick enough" to cover up their tracks far enough so that a publisher dare not reveal their swindling schemes in connection with their names.

◆

Facing Comb Honey.—A battle upon this subject was mentioned on page 266. The scene of conflict has been transferred to the pages of Gleanings for May, occupying five of them. Mr. W. M. Whitney says:

> "If a lot of poor stuff is put behind prime stock used as facing, no better evidence of intention to deceive could be presented, for it would convict the guilty party of an attempt to defraud, in any court in the country......Every honest man should put his heel upon every such transaction as he would upon the head of a viper, and assist in stamping out the whole disreputable business.....Facing honey, with poorer honey back of it....is *lying*, pure and simple."

Mr. G. M. Doolittle replies to Mr. Whitney's very warm and truthful utterances, as follows:

> "I ship a thing on commission, the commission man does the *selling*, and sells the thing for what it *proves* to be, unless I tell him he need not open it, as I *guarantee* it to be so...... Where no guarantee is made, the looks of any single article which is in sight speaks only for itself, not for what is out of sight."

Mr. F. L. Thompson refuses to be satisfied with the argument that people *expect* veneering, and says:

> "That most people expect sharp practice is no reason why it is perfectly right to satisfy their expectations. If I expect to be waylaid in passing through a back street, nevertheless no one is justified in actually taking my purse."

Umpire Root calls time, and decides against Mr. Doolittle, which is exactly as we would decide. Mr. Doolittle of course has had no experience as a commission man, nor in buying honey from a city dealer, else he would not have written this paragraph in Gleanings some time ago, which has caused him to receive such severe whacks as has been given him by Messrs. Hasty, Whitney, Thompson, etc.:

> "And I also claim that there is nothing out of the way, if any once chooses to do so, in shipping cases of honey having XXX facers and XX or X honey inside, *on commission*. Yea, more, I claim that there would nothing *dishonest* in filling the center of the case with buckwheat honey, the same having XXX white honey facers, providing it was *shipt on commission*, every case alike, and the producer thought it to his interest to do so."

We have had a little experience the past year in buying comb honey from commission men, and so know whereof we speak. Several times—yes, almost every time—the honey was "faced"—dishonestly so, too, and we did not blame the dealer, either, but the bee-keeper, who, evidently, as Mr. Doolittle says, "thought it to his interest to do so." Had the producers' names been on the various lots, we would delight in holding them up right here in print, so that all might know at least a few of the frauds among bee-keepers.

It is *very* annoying—to say nothing of the sin on the producer's part—to get in a lot of honey that *looks* very pretty next to the glass, and then when a grocer calls and wishes to open the cases before buying, to find that much of that back of the front row is so inferior as to cause the loss of a sale.

In our opinion, Mr. Doolittle can't any too soon reconsider such "claim" as he sets forth in his paragraph that we have quoted from Gleanings.

◆

A Tramp Swarm-Catcher.—The following tramp-bee "story" has been going the rounds of the newspaper press, and as several of our readers have been kind enough to mail us copies of it, we reproduce it so that all our subscribers can read it and laugh over it—tho not holding us responsible for its truthfulness:

As I sat on the veranda with the farmer after supper I askt him if he was not greatly bothered with tramps, and his reply was:

"Waal, a good many of 'em come along and want a bite to eat, and some of 'em are pretty sassy, but only one of 'em ever served me a real mean trick."

"Poison your dog?" I queried.

"It was meaner than that. We was eatin' dinner one day in the spring when a hive of bees started to swarm. I'd been expectin' it and watchin' 'em, and had a new hive ready. When bees swarm they will light on most anything handy—a limb, a bush, or even the pump. Just as the bees began to pour out of the hive and circle around along comes a tramp up the path to ask for somethin' to eat. The queen-bee settled down on his old hat and the hull swarm followed her. In two minits that tramp's head and shoulders was covered with bees, and I yells to him for heaven's sake not to try to fight 'em off or he'd be stung to death."

"He must have been terror-stricken," I said.

"Not a bit of it, sir. He was as cool as a cowcumber, and when I told him he'd have to stand in a smudge till the bees was killed off he jest laught. When they'd all settled down on him and I was going te start a smudge he sez:

"Old man, what d'ye consider this swarm of bees wuth in cold cash?"

"About $5," sez I.

"Are you willing to give $3?" sez he.

"What fur?" sez I.

"Bekase you'll either pay me $3 or I'll walk off with the bizness and sell out to somebody else."

"And you had to buy him off?" I askt.

"That's where the meanness comes in," replied the farmer. "Them bees was my property, and I wasn't buyin' what was my own. He offered to take $2, but I couldn't see how he could git away with 'em, and refused to come down. Then he starts off. I reckoned the bees would get angry and sting him to death, but nothin' happened. He just walkt out into the road and down the hill, and he carried them bees seven miles and sold 'em for a new pair of shoes."

"And he wasn't stung?"

"Not once, sir. The bees seemed to like the smell of him, and he paddled along the road as grand as you please."

◆

Getting Rid of Ants.—Vick's Magazine for May gives the following methods of getting rid of ants:

Ants in the soil can be destroyed by means of bisulphide of carbon: Make a hole about six inches deep in the ant-hill with a round dibble or bar, and into it pour a tablespoonful of the liquid, and immediately close up the hole with soil. The liquid is very volatile, and will permeate the soil in every direction, and destroy all animal life, and not injure vegetation. It is very inflammable, and must be carefully kept away from fire. Ants can often be driven away by sprinkling about their haunts ashes saturated with coal-oil. They can be trapt and killed by placing sweet-oil where they can have access to it, as they are very fond of it, but it has the effect to close their spiracles and thus kills by asphyxia.

THE WEEKLY BUDGET

Dr. E. Gallup, of Orange Co., Calif., wrote us May 2 that for some time he had been in ill-health, but was getting better again. Referring to the bees, he said:

"My bees commenced swarming March 20, and are keeping it up yet. They are doing well here in the valley."

Success in Queen Rearing is the title of a small pamphlet just issued by Henry Alley, of Essex Co., Mass. It contains 32 pages in all, about 14 of them being devoted to queen-rearing, and the balance to Mr. Alley's catalog of queens, drone-traps, etc., and advertisements of bee-supply dealers. The price of the pamphlet is 25 cents, and can be had at the office of the American Bee Journal.

Elder Daniel Whitmer, of St. Joeseph Co., Ind., when asking us lately to replace a lost copy of the Bee Journal, added:

"I do not want to miss a single number, for the reason I cannot rest good. I want to know all that is going on in the bee-fraternity."

That's right. If you "want to know *all* that is going on in the bee-fraternity," *of course* you want the old American Bee Journal. We are ready to do our part in furnishing a bee-paper that will cause every bee-keeper in the land to "rest good." Don't be restless, but subscribe for the Bee Journal, and be easy and peaceful.

Mr. Chas. W. Conklin, of Logan Co., Ill., wrote us as follows May 2:

"Brother York:—I am very sorry to acknowledge that I am so far behind with my subscription. But that is the way—the good-natured editor is always imposed upon. But to partly redeem myself I will send you a new subscriber herewith."

We trust Mr. Conklin will pardon us for publishing his letter, but it serves so well as an illustration that we couldn't resist the temptation to print it.

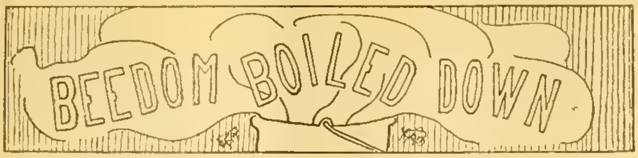
Just suppose every one of our subscribers who is in arrears would pay up to the end of 1898 and send a new subscriber for a year, as did Mr. Conklin, what would happen? Well, in the first place, the Bee Journal would have at least 8,000 subscribers *at once*; and, in the second place, *all* the readers would soon get a paper about 50 per cent. better than they are now getting.

Give us the paid in-advance list of eight or ten thousand subscribers, and we'll guarantee to furnish you the rest. "It is more blessed to give than to receive." But we can make the *receiving* a blessing to you if you will *begin* the *giving* part.

Mr. J. C. Armstrong, of Marshall Co., Iowa, writing us April 30, had this to say:

"I always read the American Bee Journal with interest. I have taken it for over 30 years, with the exception of the last three years. Four years ago I had the misfortune to have foul brood among my bees. I got it cured up and saved a couple of colonies. On moving to this place two years ago I sold what bees I had, discontinued the Bee Journal, and destroyed a hundred back numbers, thinking I had gone out of the business forever, but I felt lonesome without them. Two years ago I bought one colony of our old friend, O. B. Barrows. From that one they have increast to seven. If I could have my way they should not increase any more. But they will in spite of me. I never had them winter better. They are booming with bees. The Bee Journal has past through a good many hands since I first subscribed for it. I presume I shall keep a few bees as long as I am able to take care of them."

We think you are mistaken about the Bee Journal passing through "a good many hands" in the 30 years since you first began to read it. It has had but two different owners since 1873. That isn't a bad record, surely.



Buckwheat Sown Early, according to J. T. Van Petten, in Gleanings, yields honey on hot forenoons that succeed cool, damp nights. He has had two crops of Japanese in one season.

* * *

Curing Paralysis by Mixing Colonies.—O. O. Poppleton thinks this would not be satisfactory with him, as he never had a paralytic colony to cast a swarm. Moreover, many colonies, especially those lightly affected, seem to get well of themselves early enough for late swarming, and he wants a cure that will act early in the season.—Gleanings, p. 296.

* * *

The Disk Section-Cleaner.—James Roat (Gleanings, 98) says it must be run at high speed, 3,000 revolutions a minute or more, as the sand-paper doesn't clog as soon at high speed. He thinks a sufficient speed cannot be attained by foot-power. One sheet of sand-paper will clean about 70 sections, altho he has done twice as well. In his locality propolis is very bad.

* * *

Spraying Fruit-Trees.—C. P. Dadant says spraying does no good and may do harm before the blossoms have been off a week. "The fruit being well formed, the surface retains more of the poison, which is therefore more effective. It must be remembered that as the fruit grows, its skin expands, and a part of its surface is thus deprived of its protecting coat of poison."—Busy Bee.

* * *

Keep Up the Standard of Comb Honey is the cry of Editor Hutchinson. He says he would give a cent a pound more for his own eating for comb honey without any foundation, and the greatest blessing that has lately fallen to bee-keepers was the failure of the deep-cell foundation. He rejoices in the "change of *base*" on the part of the enterprising Medina folks, who have sent him a sample of their latest product, a foundation running 18 feet to the pound.

* * *

May Sickness, of which much is said in Europe, and which is much like, if not identical with, the spring dwindling of this country, M. Cl. Laurent says in Le Progres Apicole, is not especially confined to May, but may come any time, and is caused by eating spoiled pollen. For a cure he relies on giving frames of sealed honey of best quality, and on every fine day a half-pound of syrup consisting of one-third best honey and two-thirds sugar with one-half coffee-spoon of wine and a pinch of salt.

* * *

The Prime Thing a Beginner Should Know First is inquired for in Gleanings. Mr. Doolittle replies very fully, recommending two or three times careful reading through a good text-book, then getting a bee-paper. Then to know his locality, finding what plants give the honey harvest, then planning to have laborers ready for that harvest by having the eggs laid 37 days in advance. For that purpose "spreading brood" is advised 47 to 57 days in advance of the expected harvest, using the earlier period if weather is warm.

* * *

Plain Sections have thoroughly awakened the enthusiasm of the editor of Gleanings. The man of Straws says to him (Gleanings, p. 293,) "Hold your horses, Ernest! Don't put it quite so strong as to say the plain section 'seems about to revolutionize' (p. 267.) Remember you're right in the storm center, and 500 miles from Medina the air seems quite calm." The editor thinks he is justified in his statement in view of the number of orders for plain sections, and the fact that 10 girls are kept busy with the latest appliances turning out 700 or 800 fences a day apiece.

* * *

Average Yield.—In this Journal for Dec. 23, in reply to the question, "What would be a fair average honey crop with an apiary of from 200 to 300 colonies, located in Central or Northern Illinois?" Dr. Miller replied it would be 20 pounds less than nothing. M. A. Gill (Gleanings, p. 303) thinks this about 20 pounds too little, altho he varies the original question by saying in a *good* location, and says he knows many locations in Wisconsin where 200 or 300 colonies would not only have made a good living, but given a fair surplus for the past 20 years, with the possible exception of three years. Then he tells of Utah and Colorado. Utah County is reported to have 30,000 colonies of bees. At Payson, in that County, are 3,000 colonies on less than two miles square. Thos. M. Todd, who owns 200 of them, last year got an average of 200 pounds of extracted. 500 colonies on one block in the town of Benjamin averaged 77 pounds of comb honey.

* * *

Wants the Place Given.—"It would seem, from American Bee Journal, p. 87, that it's all right for hot water to get into the boiler, but still the Boiler don't like to get into hot water. I'm going to throw some hot water onto the outside of him because he doesn't give the page of the passage he refers to. I get disgruntled in mind when I try to refer to the original passage and can't find it."—E. E. Hasty, Review, p. 119, column 1, line 31–39. Bad to have Hasty disgruntled, and hot water isn't pleasant on one's back. Must try to give page at least part of the time.

* * *

Hot Water vs. Cold Water for Bee-Stings.—Referring to Dr. Gallup's advice (American Bee Journal, p. 68) to use a cold, wet-sheet pack for bad cases of bee-stings, Chalon Fowls thinks it might do harm and even in some cases result fatally. He uses hot water. Once a bee stung him in the bare eyeball. He groped his way to the house, applied cloths of hot water, and found the pain alleviated just in proportion to the heat of the water. In another case his horse and himself were fearfully stung, and he thinks the hot water saved the life of the horse.—Gleanings.

* * *

Bees Eating Away Upper Honey in Comb.—The editor of Gleanings said one trouble with deep frames was that bees sometimes ate away all stores at top where warmest, the bees starving with honey below them. Dr. Miller asking if there was no mistake about it, he replied that Dr. Miller would not likely have any trouble of that kind because his bees are cellared, but in Medina Co., Ohio, with bees wintering out, the trouble happens even with frames as shallow as the Langstroth. Now the editor of Busy Bee asks for a picture of such a comb.

* * *

Introducing Queens.—Busy Bee says there's no need to have a colony queenless before putting in the new queen. Here's the plan given:

"When your queen arrives, remove the board covering from the wire screen which you will find over the top of the cage. Place the cage wire down on the frames of the colony where you wish to introduce the queen. Leave the cage here for two or three days and pay no attention to the old queen. After the bees in the hive have become thoroughly acquainted with the new queen, hunt out the old queen and kill her, and then turn back the wire so the bees in the hive can get at the candy in the cage and eat it out and release the queen. Close up the wire and let the bees alone until the next day, when you can examine the colony and see how the new queen is coming on."

* * *

Foundation 18 Feet to the Pound.—A report of actual trial of this exceedingly thin-base foundation is given (Gleanings, page 312) by O. O. Poppleton, of Florida. Sheets four inches deep were put in the brood-chamber. No stretching could be observed in the lower part. The upper inch stretcht from 1-16 to ⅛-inch, and he thinks the stretching of the whole sheet would not exceed 3-16. This is very promising, and the editor thinks it possible that hanging the sheet differently might have given a still more favorable showing, for this 18-foot foundation is to be hung exactly the reverse of the usual way. He says it is lighter than the no-wall article, and the walls will prevent the warping to which the no-wall is subject. In a trial of thin and extra-thin, that is 11 and 13 feet-to-the-pound foundation, with the 18-foot, side by side, the bees accepted the latter quicker, and drew it out farther than the other two!

* * *

Cleats vs. Hand-Holes.—J. H. Martin and Dr. Miller are having a little bout concerning them in Gleanings, Editor E. R. Root standing by saying, "Sick him!" Mr. Martin says (p. 249) Dr. M. ought to *know* that cleats are a back number. Their chief use is to carry hives into the cellar, and when he did that in York State it was more comfortable to grasp the hive at the bottom. In moving hives the cleat is a nuisance, taking up the room of 20 hives in such big loads as Mr. Mendleson hauls. In reply Dr. Miller asks (p. 292) why under the sun the California man wants hand-holes if there's more comfort in grasping the bottom. Says you can take hold of a cleat where you like best, it is more comfortable than a hand-hole, and two can handle the same hive. Only the back cleat takes extra room in a load, and to take up the room of 20 hives he figures out that Mendleson must have had 500 hives in a load.

Two Special Offers.

As explained in former ads., publishers can afford to put forth extra efforts in securing *new* subscribers; as the majority remain, once they become subscribers to a *good* journal. It is from this point of view that I make the following offers:

Offer No. 1.

To any one not a subscriber to the Review who will send me $3 00. I will send the Review for 1898 and 1,000 strictly firstclass, snow-white one-piece Sections. After accepting this offer if any one wishes to buy more sections. I will furnish them at the following prices: 1,000, $2.75; 2,000 for $5.25; 3,000 for $7.50; 5,000 for $12 00. Sections will be shipt from any of the following points: Flint, Mich.; Chicago, Ill.; Medina, O.; Jamestown, N.Y.; Higginsville, Mo., or Omaha, Neb.

Offer No. 2.

To any one not a subscriber to the Review who will send me $1.50. I will send the Review one year and a fine, TESTED Italian Queen. Purchasers may have either the bright, golden strain, or the dark leather-colored reared from imported mothers. After accepting this offer, if any one wishes more queens, they will be furnisht at the following prices: Single queen, 90 cts.; 3 for $2.65; 6 for $5.00; 12 or more at 75c each. Orders will be filled in rotation, and safe arrival guaranteed.

Unless otherwise ordered subscriptions will begin with the January issue; and the December, 1897, number will also be sent, free.

If you are not acquainted with the Review, and wish to see it before subscribing, send 10 cents for three late but different issues, and the 10 cents may apply on any subscription sent in during 1898. W. Z. HUTCHINSON,
FLINT, MICH.

Please mention Bee Journal when writing.

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With our Duplex Automatic Machine you can make a genuine Rabbit-Proof fence, and one that is also Horse-high and Bull-strong for 16c A ROD a Hog fence for 12c. and a Stock or Chicken fence for 18c a rod. Plain, Coiled Spring and Barbed wire to farmers at wholesale prices. Catalogue Free.
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Our 1898 Mammoth Poultry Guide of 100 pages mailed FREE. Something entirely new, tells all about poultry, how to be a winner, how to MAKE BIG MONEY. Contains beautiful lithograph plate of fowls in their natural colors. Send 15 cts. for postage. JOHN BAUSCHER, Jr. Box 91 FREEPORT, ILL.

44A26t Please mention the Bee Journal.

QUESTION-BOX

In the multitude of counsellors there is safety.—Prov. 11-14.

United States Bee-Keepers' Union.

Query 71.—Of course you are interested in the success of the United States Bee-Keepers' Union. What would you advise in order that its membership may soon be so increast as to make it (the Union) of the greatest possible good to the bee-keeping pursuit?—P. O.

Rev. M. Mahin—I have no mature opinion to express.

C. H. Dibbern—I will leave this question to Dr. Miller. I don't know.

Prof. A. J. Cook—For it to show, as I believe it will, that it has a mission, and then to fill it.

E. France—I believe the Union is a good thing. How to increase its members, I don't know.

J. M. Hambaugh—The brains of the old "*war horses*" are at the helm. My advice would be insignificant.

Mrs. L. Harrison—When we have a fair crop of honey, and can sell at a reasonable price, we will all join.

G. W. Demaree—I once was interested in the Bee-Keepers' Union, but since it has switcht off, I have lost all faith in it.

G. M. Doolittle—Let every bee-keeper become interested in the Union to the extent of $1.00 annually, and "the thing will go."

Eugene Secor—I advise all people interested in putting down adulteration, and all in favor of compelling dealers in honey to be honest, to join it.

Dr. C. C. Miller—Perhaps constantly holding up its advantages to those not yet members. Write it up and talk it up. Business men advertise.

Chas. Dadant & Son—Talk it up, subscribe to it, and above all *stay with it*. Make it useful just as soon as you can. Perseverance and grit always succeed.

Jas. A. Stone—That the Union protect its members in the right, and the bee-keepers' interests against every fraud. To begin with, the adulteration of honey.

R. L. Taylor—You have the cart before the horse. "Make it the greatest possible good" to its membership, then its membership will be sufficiently increast.

Dr. J. P. H. Brown—Formulate its advantages in the strongest language possible, and then to send out to all the known bee-keepers in the United States with an earnest appeal for their support.

W. G. Larrabee—How would it work to have small societies join the United States Bee-Keepers' Union by paying to it a certain sum annually, and let each member of the small society be a member of the Union.

J. E. Pond—Who can advise? If the bee-keepers of the country are not now convinced that in "union there is strength," how can any opinion convince them? The Old Union became a power in the land—why should not a union which is a Union work out results that

GOLDEN BEAUTIES...

Three-band Italian Queens reared from Root's stock. Golden Queens, from the best selected stock. Untested, 50 cents; Tested, 75 cents. Carniolan Queens at same price.

E. Y. TERRAL & CO.,
Cameron, Texas.

12Atf Mention the American Bee Journal.

Queen-Clipping Device Free

The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 30 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

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If you are interested in sheep in any way you cannot afford to be without the best and only weekly sheep paper publisbed in the United States.

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has a hobby which is the sheep breeder and his industry, first foremost and all the time. Are you interested? Write to-day.

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Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

J. P. H. BROWN, Augusta, Ga.

EGGS

From pure bred, barred P. Rocks Large and fine plumaged. $1.00 per 15. Also Light Brahmas and Black Langshans, same price. B. P. Rock Cockerels, $1.25.

MRS. L. C. AXTELL,
ROSEVILLE, ILL,

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BEES! Florida Italian QUEENS!

Tested Queens. $1.00 each; Untested, 50c. Prompt and satisfactory dealing.

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Bee-Hives, Sections, Shipping-Cases—everything used by bee-keepers. Orders filled promptly. Send for catalog. MINNESOTA BEE-KEEPERS' SUPPLY MFG. CO., Nicollet Island, Minneapolis, Minn.

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Baptist Anniversaries, at Rochester, N. Y., May 16-24, 1898—The Nickel Plate Road is authorized to sell tickets to Rochester, N. Y., and return, at one fare and one-third for the round trip, on certificate plan, account of above meeting. Tickets good on any of our through express trains leaving Chicago daily from Van Buren Street Passenger Station at 10:35 a.m., 2:55 p.m., and 10:15 p.m. Vestibuled sleeping cars and unsurpast dining car service. You will save time and money by patronizing the Nickel Plate Road. For further information address, J. Y. Calahan, Gen'l Agent, 111 Adams St., or telephone Main 3389. (16)

will prove advantageous? Cannot every bee-keeper see that it is for his advantage to join with other bee-keepers spread all over the country, in an attempt to better his condition? Individual efforts will cover but a small territory, while a Union will cover the whole ground, and take in the whole brotherhood.

Emerson T. Abbott—I would advise every man (and woman, too, if she is interested in honey-production) who reads this to send in a dollar and become a member of the Union. All the Union needs is a large membership, and each individual bee-keeper should feel that he is in duty bound to do his part toward increasing that membership. Send in your dollar now, before you forget it.

GENERAL ITEMS

Swarming and Storing Honey.

Bees have been swarming since the middle of March. A swarm hived on March 17 and one on the 20th now have supers on. Some old colonies have supers nearly full of honey, and I have put on the second one.

SOUTH ALABAMA.

Washington Co., Ala., April 5.

Heavy Freeze Put Things Back.

We had a freeze here March 22, when drones were flying and bees preparing to swarm, but fruit is mostly killed, also corn and garden vegetables, so it will be brown and sear for a time at least, but warm weather will soon cause all Nature to be herself again.

G. W. BISTLINE.

Titus Co., Tex., April 4.

Wintered Well—Worms.

I have three colonies of bees which are doing nicely. One is bothered with worm-nests a little, but as they are in box-hives we cannot do much with them in the way of helping them to get rid of the worms. They wintered nicely, as it was a good winter for bees. They are on the summer stands, and had flights off and on all winter. They are doing nicely, as it is warm enough for them to be able to get pollen.

W. G. SAGER.

Venango Co., Pa., April 11.

Cronkleton Escape and Press.

Mr. Geo. W. Blair, of Mason county, Mich., askt what had become of E. J. Cronkleton and his bee-escape. We are out in Iowa, as usual. I am induced to write only through respect to Mr. Blair, not that I care so much about my bee-escape, or any other escape that is in use. I presume the Porter bee-escape is the best escape on the market. I use his in my apiary. The difference is 12 to 1—12 bees go out of my escape while 1 goes out of his. The way to demonstrate this is to cut out a narrow strip of the lower edge of the section-case and insert a strip of glass instead, and then lie down in the grass and take items.

When I invented my escape I had several things in view, the first being to take advantage of the natural instinct of the bees, cheapness and rapidity of work, and ventilation. My escape costs but a few pennies. It frees a case in from one to three hours.

There is a difference in bees leaving the cases, that I am unable to account for. Some seem loth to leave, and others seem very desirous to leave. These things I have learned through an observatory section-case. I said before, I take the advantage of the natural impulse of bees. I have a large unobstructed outlet; the bees come

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BINGHAM
BeeSmoker
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Bee-Smokers and Honey-Knives!

Smoke Engine (largest smoker made)	4-in. stove.	Doz. $13.00;	each, by mail, $1.50
Doctor	3½ in. stove.	Doz. 9.00;	" 1.10
Conqueror	3-in. stove.	Doz. 6.50;	" 1.00
Large	2½-in. stove.	Doz 5.00;	" .90
Plain	2-in. stove.	Doz. 4.75;	" .70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz. 4.50;	" .60
Honey-Knife		Doz. 6.00;	" .80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

Mr. Bingham, Dear Sir:—Please send per mail a 4-inch Smoke Engine. I have one of your Smokers; it is too small in time of trouble.

February 21, 1898. A. F. SEWARD, Riverside, Calif.

9A9t **T. F. BINGHAM, Farwell, Michigan.**

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EVERY BEE-KEEPER

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A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book publisbed today. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."

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Send us **Two New Subscribers** to the Bee Journal (with $2.00), and we will mail YOU a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both together for only $1.75. But surely anybody can get only 2 new subscribers to the Bee Journal for a year, and thus get the book as a premium. Let everybody try for it. Will you have one?

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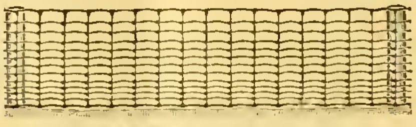
Supreme Council of the Royal Arcanum will hold a meeting in Cleveland, Ohio, May 18–25, for which the Nickel Plate Road is authorized to sell tickets at one and one-third fare for the round trip, on certificate plan. Unexcelled dining car service. Vestibuled sleeping cars. Three through trains daily from the Van Buren Street Passenger Station. For full particulars call up telephone Main 3389, or address J. Y. Calahan, General Agent, 111 Adams Street. (13)



IN PEACE

most any soldier will do, but "when duty calls" we need genuine stuff. Crops threatened with invasion need a fence that really protects.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Bee-Keeper's Guide—see page 300

Sweet ⁝ Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order·

	5lb	10lb	25lb	50lb
Sweet Clover (white)	.60	$1.00	$2.25	$4 00
Alsike Clover	.70	1.25	3.00	5.75
White Clover	.80	1.40	3.00	5.00
Alfalfa Clover	.60	1.00	2.25	4.00
Crimson Clover	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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Southern Home of the Honey-Bee

Is now ready for your orders for QUEENS of either 3 or 5 **Banded Italians and Steel Gray Carniolans.** More than 300 Tested Queens to begin with. Untested, either race, 75 cts. each; June and until October 50 cents each. Tested $1.00 each. Good Breeders, $2 each. Straight 5-Banded or "Faultless" Queens, $5.00 each. Satisfaction guaranteed.

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Send for our new catalog.
Practical Hints" will be mailed for 10c in stamps. Apply to—

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OUR PRICES are worth looking at. We are making the new

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That covers the whole Apicultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

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Liberal Discounts to the Trade.

PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. A. VAN DEUSEN.
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y.
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BEE-KEEPERS! Let me send you my 64-page Catalog for 1898
J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing

down into the escape from the sections, hunting an outlet; as soon as it is found they set up that joyful hum, swarming hum, that we are all familiar with. Then you will observe them pouring down out of the sections, and take up the line of march in a perfect sheet or column, pouring out upon the brood-frames, 10 or 12 bees going out at the same instant.

I am not writing up this little escape for any purpose in particular—it is no great invention. It is merely a thought, and any bee-master ought to get up the same thing or a better one in five minutes.

While I am on this subject of inventions, I wish to say something concerning a small section-press that I invented, probably six years ago. I tried to make something out of it but failed. I see that it is being very extensively manufactured now. I suppose there is no doubt but I invented it. I will try to describe it. It has a base and two upright posts 4¼ inches apart; guards and posts, and lever. It is not my place to say whether this is a good press or a bad one, but the public has it now. But I ask this much, that it should bear my name—"The Cronkleton Section-Press."

E. J. CRONKLETON.
Harrison Co., Iowa.

Wintered Extra Well.

Bees in this section wintered extra well, and are busy at work every warm day.

ERWIN GABRIEL.
Green Co., Wis., April 17.

Wintered in Good Condition.

I put into the cellar 12 colonies Nov. 17, and took them out April 15, all in No. 1 condition. That is about five months without seeing the light. GEO. A. LAWRENCE.
St. Croix Co., Wis., April 19.

Cool and Late Spring.

Our spring has been unusually cool, and probably the bees are like everything else—late. Peaches have not bloomed, but are in No. 1 condition. T. F. BINGHAM.
Clare Co., Mich., May 5.

Bees in Fine Condition.

Out of 54 colonies I lost two since putting them into winter quarters. The balance are in fine condition, but the weather is cold and windy, which holds them back from working on the soft maple and willow, which are in full bloom.

CHAS. E. CRAWFORD.
Oscoda Co., Mich., April 36.

A Beginner's Report.

I started last spring with one colony of bees and increast to three. It is very fascinating to me, and I like to read everything I see on the subject. I moved to this place from Fremont, Nebr., the first of this month. I believe this will be a good bee-country. F. M. ROSEMAN.
Crawford Co., Mo., April 19.

Suggestions on Bee-Organizations.

MR. EDITOR:—If your patience is not already exhausted I will try to tell "Inquirer" (see page 188) what kind of an organization I would like to see perfected among bee-keepers.

As most readers of the Bee Journal know there are two separate national organizations already in the field, whose aims and objects are almost identical. That their power for good would be multiplied many times over by being united is self-evident; and that should be the first step toward laying the foundation for a great organization.

The Board of Managers or Executive Committee of the united body should then invite every State and county bee-keepers' association in the United States to become a member of the federation by paying into the treasury of the executive one-half, two-thirds (or whatever proportion is deemed advisable) of their membership fees. Then,

$100

Given as Bounties to purchasers of the improved Danz. Hives and Sections See schedule in my bee-book "Facts About Bees." Tells how to produce honey that sells for the most money. Free for 2c in stamps. Address
THE A. I. ROOT CO., Medina, Ohio.
or F. DANZENBAKER, Box 466, Washington, D. C.
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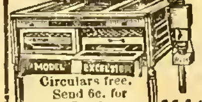
Excelsior Incubator and Brooder Cheap .....

200 eggs capacity. Good as new. Used for only two hatches. Everything complete. Will sell it for
TWENTY DOLLARS, half the cost price
Address, **P. W. DUNNE,**
River Forest, Cook Co., Ill.

Texas Queens

Best honey-gathering strain in America. Tested, $1.50. Untested, $1.00. Write for a Circular. **J. D. GIVENS, Lisbon, Tex.**
7A26t Please mention the Bee Journal.

HATCH Chickens BY STEAM—With the MODEL



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EXCELSIOR Incubator

Simple, Perfect, Self-Regulating. Thousands in successful operation. **Lowest priced first-class Hatcher made.**
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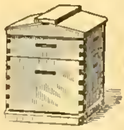
114 to 122 S. 6th St. Quincy, Ill.

44A26t Please mention the Bee Journal.



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Ponder's Honey-Jars, and every thing used by bee-keepers Prompt service, low freight rate. Cat-free. Walter S. Ponder,
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Tested Queens in April and May, $1.00. Untested, 75c Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

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Bees for Sale in Indiana!

Italian Bees in 8-frame Langstroth hives. Per colony $5.00; 5 or more at one time $4 50 per colony. I have only a limited number for sale. They are strong colonies, and ready for business. Address, **W. H. WATTS,**
19Atf **Ross, Lake Co., Ind.**
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Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

instead of paying 50 cents or a dollar to a local association, and a dollar each for membership in the two national ones, one membership fee would cover the whole. Our local association would then be the Minnesota branch of the United States Bee-Keepers' Association.

It needs no argument to prove that such an organization is both desirable and possible, for we have already the material from which to construct it, in our various associations. Some changes in the constitution of the United States Bee-Keepers' Union might be necessary in order to allow the increast membership as above indicated; and also some changes in the constitutions of the associations joining, but in fact they would have no constitution after being absorbed by the federation. They would have to make by-laws in accordance with the constitution of the executive. However, it will be time enough to discuss details when the matter gets underway.

That is simply an outline of the organization for which I am willing to strive, and in the meantime I can only afford to be a member of the two to which I already belong. WM. RUSSELL.

Hennepin Co., Minn.

A Correction—Cold April.

On page 259 I am made to say that I cut rabbets 3-16 of an inch deep. I said 13-16. [Right you are.—EDITOR.]

My colonies are mostly in good condition, with plenty of stores. April has been a very cold month, and brood-rearing is not very well advanced. Plum and peach trees are beginning to bloom. Apple trees are not in blossom yet. It was showery last night and to-day. EDWIN BEVINS.

Decatur Co., Iowa, April 30.

A Carpenter Bee-Keeper.

I had 17 colonies of bees last spring. I got 1,000 pounds of honey from them. This spring I have 31 colonies. I have had bees for 10 years, just for my own use, but not to make a business of it. I work at carpentery, but it is dull at my trade this spring, so I think I will see what I can do with the bees this year. O. D. FRENCH.

Jones Co., Iowa, April 18.

Profitable Fun with Bees.

I am not a regular bee-keeper, but a locomotive engineer, and keep a few bees for fun; or, you may say, to rest up my head after many a long run. I have 15 colonies nicely arranged in the back-yard, and I believe it rests me up when I am at home to go out among them and see them work and caper around. They averaged about 125 pounds per colony, half comb and half extracted, last year, so you see, we have a fairly good location.

SANFORD HARTMAN.

Lincoln Co., Nebr., April 23.

Wintering—Spring Management.

Last fall I prepared 26 colonies for winter—six colonies in the cellar and the balance on the summer stands. Those that were not already in chaff hives I put outer cases over, packing the inter-space with fine planer-shavings, or something similar. On part of them were "sealed covers." On the balance was Hill's device, covered with a thick, porous cushion. The entrances were left open full width, with a board leaning against the hive, shading the entrance. This I remove when warm enough for the bees to fly.

Last week I examined them, taking out the frames from every hive. Contrary to a late writer in the Bee Journal, I believe in examining them at an early date, thereby aiding them in "house-cleaning." In almost every hive I find something I can do to aid them—a moldy piece of comb to remove, dead bees and mold on the bottom-board, a surplus frame of honey to remove, etc. This examination through, I have nothing more to do till swarming-time.

I never have occasion to feed in the

Page & Lyon Mfg. Co. New London, Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

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They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

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that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

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Italian Bees For Sale !!

We have arranged with a large bee-keeper in Lee County, Ill., (about 100 miles west of Chicago), to fill our orders for Italian Bees at the following prices there, which include a good Queen with each colony:

8 L. frames of bees in light shipping-case. $3.75; 5 at $3.50 each.

8 L. frames of bees in dovetailed hive, $4.25. 5 at $4.00 each.

Prompt shipment after May 1, and safe arrival and satisfaction guaranteed. Address

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Of Bee-Keepers' Supplies in the Northwest. The very latest up-to-date and best Hives made, Danzenbaker Hives. Hives for Slotted Sections, and a very low-priced Hive, and carloads of other goods, all in our warehouse ready to ship.

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H. G. ACKLIN, Manager.
17A5t 1024 Mississippi Street St. Paul, Minn.

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For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 27 cents per pound, CASH. No commission. Now if you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

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If it's **Buggies, Harness, Saddles, Bicycles, Sewing Machines, Feed Cookers, Cider Presses, Spray Pumps, Poultry Supplies** or anything else, we can supply it direct from the factory. No matter what it is, or where it is made, we can supply it ***and save you money too.*** Try us. Write for our illustrated catalogue, circulars, etc.

MAKE YOUR WANTS KNOWN

Frank B. Barkley Mfg. Co. 835 Old Colony, Chicago, Illinois.

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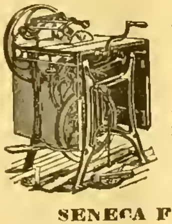
Working Wax into Foundation for CASH **A Specialty.**

Hives, Sections, and a full line of Supplies. The **best** of everything. Write for Catalog, with prices, and samples of Foundation and Sections.

BEESWAX always wanted for cash or trade.

GUS DITTMER,
AUGUSTA, WIS.



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Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery Sold on Trial. Catalogue Free.

SENECA FALLS MFG. CO.,
46 Water St SENECA FALLS, N. Y

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—ITALIAN—

Bees and Queens

Queens $1.00; Bees by the pound $1.00; Nuclei, two frames with Queen, $2.00; one-frame $1.50. Also **Barred and White P. Rocks and Silver-Laced Wyandottes.** Eggs for Sitting at $1.00 per 15.

17A8t **Mrs. A. A. Simpson, Swarts, Pa.**

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Listen! Take my Advice and Buy Your Bee-Supplies of August Weiss !

FINE FOUNDATION AND TONS OF IT. Working Wax into Foundation a Specialty.

I DEFY competition in Foundation

Millions of Sections—Polisht on both Sides !!

SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalogue and be your own judge. Wax wanted at 26 cents cash, or 28 cents in trade, delivered to me.

AUGUST WEISS, Hortonville, Wisconsin.

spring, as I always in the fall see that they have sufficient stores for winter and spring, believing that ample stores in sight a better inducement for them to build up in the spring than to live "from hand to mouth," depending upon "stimulative feeding."

I have now 25 strong colonies out of the 26, finding one queenless.

Now, after experimenting and careful observation for several years, I would answer the "wintering problem" in these words:

In the fall see that the bees have ample stores, pack on the summer-stands, in outer cases, with the inter-space packt with a dry substance, with a porous cushion over the frames, and a space between frames and cushion. This method has given me the best results. J. P. SMITH.

Sullivan Co., N. H., April 20.

Came Through in Fine Condition.

My bees have come through the winter in fine condition, excepting the loss of one strong colony, leaving about 30 pounds of honey. I think they must have been disturbed in a cold time, as they were scattered through the hive. About a month ago I commenced giving them rye flour, in a box covered with glass, as they seemed to have no bee-bread, and they have been breeding up very fast since. Three weeks ago they commenced to work on soft maple, but a big freeze put a stop to that, and they have brought in no natural pollen since, until the last two or three days. Everything looks favorable for a good honey-year. I could not think of trying to get along without the "old reliable" American Bee Journal. Hurrah for Omaha!

A. B. GINNIS.

Cass Co., Nebr., April 11.

Cold and Rainy Weather.

I am a beginner in bee-culture, and very often I find in one copy of the American Bee Journal what is worth the price of a year's subscription to me.

I had 12 colonies packt in straw on the summer stands the past winter, and they all came through in good condition. They had a good flight March 9, and brought in the first pollen March 30; then we had cool weather until April 10, when they began bringing pollen in quite freely. I saw some drones flying in the yard also, which an old bee-keeping friend tells me is something uncommon in this part of the country so early. At the present time we are having bad weather—cold and rainy.

C. H. FIELD.

Cumberland Co., Maine, April 24.

Wintered Best for Years—Robbing.

The bees in this part of Iowa came through the winter in the best condition they have for years. My 141 colonies came out of the cellar so strong that it is hard to find weak ones to double the queenless ones with. No trouble with robbing. I see in the Bee Journal, to stop robbing, one should use salt and water. My experience with salty water is, it doesn't want much salt in; if you get too much in it will kill the bees. Clear water is better to spray them with. I sprayed with salty water once and killed a colony. With me a sheet is better to stop robbing. Spread it over the hive and occasionally turn it.

CHAS. BLACKBURN.

Buchanan Co., Iowa., April 21.

The Divider vs. the Fence.

On page 70 the Boiler turns out the following:

"The A. I. Root Co., in connection with the fence separator, proposes to make use of the Pettit plan by having a fence between the outside rows of sections and the sides of the supers. S. T. Pettit thinks this will not be so good as his divider with ⅜-inch holes, for with sufficient space between the slats the sections will be made ridgy."

But a good deal more serious objecion to the fence as a divider consists in the fact that the fence provides for a bee-space only 2-12 of an inch against the super wall. Nothing less than ¼ inch will give best results. This season I shall experiment with a large number of dividers with 5-16 inch bee-space outside the dividers. Of course, those who have room to do so can easily give the ¼ inch bee-space. S. T. PETTIT.

Ontario, Canada.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, May 2. — Fancy white comb honey would bring 11 cents, but there is none here; other good grades of white at 9 to 10c.; dark and amber, 7 to 8c. Extracted, white, 5 to 6c.; ambers, 4½ to 5c.; dark and off grades, 4c., with exception of dark candied and amber grades. This market is bare of comb, and while prices have been low the quantity sold locally has been greater than last season. Beeswax scarce, and sells at 27c. for average lots. R. A. BURNETT & CO.

Kansas City, May 2. — Fancy white, 9 to 10c; No. 1, white, 9c; amber, 8 to 9c. Extracted, white, 5 to 5½c; amber, 5c; dark, 3½ to 4c. Beeswax, 20 to 25c.

Comb honey is selling fairly well ,but prices are low; considerable shows signs of candying, which makes dealers anxious sellers.

C. C. CLEMONS & CO.

Cincinnati, May 2.—Demand fair for extracted, at 3½ to 6c. according to quality. Demand for comb is slow at 10 to 13c. for best white. Beeswax in good demand at 20 to 25c. for good to choice ye low.

CHAS. F. MUTH & SON.

Boston, May 2.—Fancy No. 1, in cartons, 13c.; in glass-front cases, 12c.; A No. 1, 11c.; No. 1, 9 to 10c.; No. 2, no sale. Extracted, white, 6@7c.; light amber, 5@6c. Beeswax is in very light supply, and if pure would readily bring 27c.

There is nothing new to note in our market for honey. As usual at this time of year, the demand has dropt to almost nothing, but as the supply is light, prices are well maintained and firm. BLAKE, SCOTT & LEE.

Cleveland, May 2.—Fancy white, 12 to 12½c.; No. 1, 11c.; No. 1 amber, 9 to 10c.; buckwheat, 8c. Extracted, white, 6c.; amber, 4 to 5c. A. B. WILLIAMS & CO.

San Francisco, May 2.—White comb, 8½ to 10c; amber, 6½ to 7½c. Extracted, white, 5½@6c.; light amber, 4¾ to 5¼c. Beeswax, 24@26c

Market shows a healthy tone, especially for extracted, with very little of this class now remaining. Comb continues obtainable at former rates, with a fair business doing on local account. There will be little honey the coming seaoon, and it is probable that values will further harden.

Detroit, May 2. — Fancy white honey is lower and now quoted at 11c. No. 1, 9@10c; fancy dark, 7@8c; No. 1 dark, 6@7c. Extracted, white, 5@6c; dark, 4@5c. Beeswax in good demand at 26@27c.

There is considerable dark and undesirable honey on commission now, and some of it will be carried over to another season.

M. H. HUNT.

Minneapolis, May 2.—Honey much more encouraging. Fancy white clover comb is selling here now at 10½@11½c. Not advisable to ship darker than amber. Extracted fancy white clover, 5½@6c; amber, 5c; dark, 4@4½c.

Outlook for honey much more encouraging.

S. H. HALL & CO.

Indianapolis, May 2. — Fancy white 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand. WALTER S. POUDER.

Milwaukee, May 5.—Fancy 1-pound sections, 11@12c; A No. 1, 10@11 cents; No. 1 8@10c; amber, 8@8½c; dark, 7@7½c. White extracted in barrels and kegs, 5½@6c; amber, 5@5½c. Beeswax, 26@28c.

The demand for honey continues very good indeed, and values fairly sustained. While the best grades are most salable, the inferior grades meet attention, and the movements are quite satisfactory. A. V. BISHOP & CO.

Buffalo, May 2. — There is a very good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

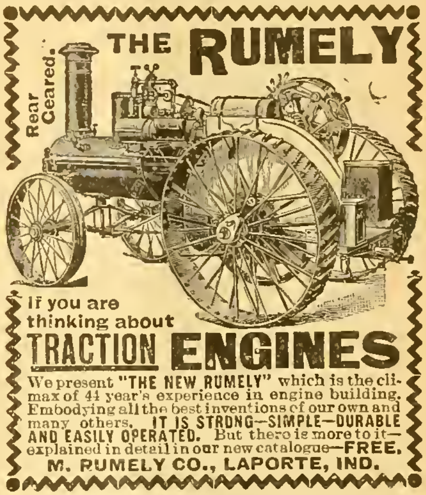
St. Louis, Feb. 9.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c Beeswax, 20 to 22c.

WESTCOTT COM. CO.

DR. PEIRO,

CENTRAL MUSIC HALL, CHICAGO,

Please mention Bee Journal when writing.



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Van Deusen Thin Foundation...

We have several 25-pound boxes of Van Deusen Thin Flat-Bottom Comb Foundation for sale, at $12.50 per box. This Foundation is preferred by many. As we have only a few boxes of it, an order for same should be sent promptly. Address **The A. I. Root Co.** 118 Michigan Street, Chicago, Ill.

METAL WHEELS

in all sizes and varieties, to fit any axle. They last forever. Either direct or stagger spoke. Can't break down; can't dry out no resetting of tires. Good in dry weather as in wet weather. Send for catalog & prices. ELECTRIC WHEEL CO., Box 16 QUINCY, ILL.

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Catalog Free **A. I. Root & Co's Goods** for Missouri and other points, to be had at factory prices from **John Nebel & Son, High Hill, Missouri.** 9Atf

Convention Notices.

Illinois—The spring meeting of the Northern Illinois Bee-Keepers' Association will be held at the residence of Alexander Patterson, 5 miles northwest of Rockford, Tuesday, May 17, 1898 All are cordially invited.

B KENNEDY, Sec., New Milford, Ill.

Central California.—The next annual meeting of the Central California Bee-Keepers' Association will be held at Hanford, Cal., Wednesday, June 1, 1898, at 10 o'clock a m. Election of officers and other important business to be attended to.

W. A. H. GILSTRAP, Sec.

Caruthers, Calif.

Fresno Co., Calif.—The next quarterly meeting of the Fresno County Bee-Keepers' Association will be held at the City Hall, in Fresno,Calif .Wednesday, June 8, at 1 o'clock p. m. Constitution and By-Laws are to be adopted. Marketing honey and other business is to come up for consideration.

W. A. H. GILSTRAP, Sec.

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It is the kind that does not sag.
It is the kind you want.

If you once try it you will have no other. Samples furnisht **FREE.** Large illustrated Catalog of all kinds of

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NEW YORK, is the city,
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Who is prepared to ship you, on short notice, **anything** in the apiarian line.

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Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**
Cash for Beeswax. BELL BRANCH, MICH.

Please mention Bee Journal when writing.

I ARISE

TO SAY to the readers of the BEE JOURNAL that **DOOLITTLE** has concluded to sell —BEES and QUEENS— in their season, during 1898, at the following prices :

One Colony of Italians on 9 Gallup frames, in light shipping-box	$6 00
Five Colonies.....	25 00
Ten Colonies.. ...	45 00
1 untested queen.	1 00
6 " queens	5 50
12 " "	10 00
1 tested Queen...	$1 50
3 " Queens.	3 50
1 select tested queen	2 00
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Select tested queen, previous season's rearing	3 00
Extra Selected for breeding, THE VERY BEST..	5 00

About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

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Circular free, giving full particulars regarding the Bees and each class of Queens.

Address

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21st Year Dadant's Foundation. 21st Year

Why does it sell so Well?

Because it has always given better satisfaction than any other.
Because **IN 21 YEARS** there have not been any complaints, but thousands of compliments.

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What more can anybody do? **Beauty, Purity, Firmness, No Sagging, No Loss.**
PATENT WEED PROCESS SHEETING.

Send Name for our Catalog, Samples of Foundation and Veil Material. We sell the best VEILS, cotton or silk.

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LANGSTROTH ON THE HONEY-BEE, Revised.
The Classic in Bee-Culture—Price, $1.25, by mail.

Foundation and Beeswax Prices Advanced.—We quote an advance of three cents in Foundation, wholesale and retail, on the prices quoted in our Circular. BEESWAX WANTED, at advanced prices also.

CHAS. DADANT & SON,
Please mention the Am. Bee Journal. **HAMILTON, Hancock Co., ILL.**

OUR MOTTO—" Well Manufactured Stock ! Quick Shipments ! "

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—AND—
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Write for Illustrated Catalog and Price-List FREE.

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- Cowan Extractors.
- Porter Bee-Escapes—the best made.
- Dovetailed Hives—with Danz. Patented Cover and Bottom.
- Danzenbaker Hives.
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38th Year. CHICAGO, ILL., MAY 19, 1898. No. 20.

CONTRIBUTED ARTICLES

The Apiary of Mr. John Bodenschatz.

My apiary is situated on the northern slope of a small hill, and consists of 72 colonies, of which 60 are of pure Italian blood. I produce both comb and extracted honey, and last year, from 38 colonies, spring count, I increast to 72, and produced 5,700 pounds of honey. The best colony which I run for comb honey produced 190 pounds of very fine white honey; while 12 colonies which I ran for extracted honey produced 2,700 pounds.

The hives in the foreground are 16x20, by 12 inches high, outside measure, and hold 13 brood-frames. These hives give me the best results, as the bees winter safely on the summer stands, and the queen has a large brood-chamber, which a good queen can easily keep filled.

Apiary of John Bodenschatz, in Cook County, Illinois.

With me bee-keeping has been a success. Starting in 1892, when but 15 years of age, with one colony, and buying 10 more two years later, I have now a fair-sized apiary. I work at the bees whenever I have a few minutes spare time, as I am employed in a drugstore, and am now attending the Northwestern University School of Pharmacy, from which I expect to graduate next month. So it keeps me quite busy this spring attending to my duties.

Last spring, while reading in the "Old Reliable" about the instinct of bees, a thought came to me that by placing boxes in the timber, selecting large trees in an open place, I might capture swarms that were off to the woods from the surrounding farm places, where bees are kept in a rather rude fashion, and the honey brought to the market in a very poor condition, which they offer very cheap, and therefore pull down the price of the fancy white comb honey that a careful bee-keeper produces.

Well, I placed four boxes of the Langstroth size in the trees, about 10 to 15 feet high, and as I came through the woods about eight days later, I found them occupied with thriving colonies of hybrids. I captured seven colonies in this way without the least trouble. By putting an old section (one which had comb in) into these boxes, the bees would occupy them more readily, and as soon as I took them home I transferred them into regular hives.

My principal honey-flow comes in June, July and August, from the basswood, white and sweet clover. I think sweet clover is the best honey-plant for bee-keepers to sow. It spreads very rapidly, withstands drouth, grows on any ground, and blossoms when the bees are the strongest.

Cook Co., Ill. JOHN BODENSCHATZ.

Comb Honey—Leveled-Down and Bait Sections.

BY C. DAVENPORT.

Some have said, and no doubt there are many more who think, that there is nothing more that can be profitably written about the production of comb honey, but I am not one of them, for I have not only read the standard works and most of the current literature on bees, but I have for many years produced comb honey by the ton each season, and last season, altho it was the poorest I have ever known, I lost at least $300 by not understanding the business better than I do; and but a few years ago I lost probably $400 for the same reason. But this was owing to such a peculiar cause that, briefly explained, it may be of interest to some.

That year white clover was quite abundant, and blossomed luxuriantly on low land, but it yielded very little honey. Basswood blossomed in great profusion, and yielded well. At that time I was running nearly 400 colonies for comb honey. They were located in three yards, all of them near basswood. Sections by the thousand were being (to borrow another's expression) "filled as if by magic."

I was keeping close watch of the bloom, and in a short time I noticed the blossoms were beginning to fail off very rapidly, to such an extent, in fact, that myself and assistants considered it best not to put on any more empty supers, in order not to have a large number of unfinisht sections at the cessation of this basswood flow, which is the end of the white honey harvest here. Therefore, everything possible was done to meet the conditions of a flow which it was believed must very soon cease.

In a short time the trees were bare of blossoms, but there was not much, if any, let up in the amount of honey coming in. Investigating the matter it was seen that the bees were working on the blossoms which had fallen off and lying on the ground. But I did not believe that these blossoms would, or could, yield more than a day or two, but they continued to yield day after day. Still, I could not believe it was best to put on more supers until they had about ceast to yield. I believe there would have been nearly as much gathered after the blossoms had fallen as while they were on the trees, if room had been given to store it. But how they could yield honey after they had fallen the way they did, has always been a mystery to me. There was no rain while they were yielding on the ground, and if I remember rightly, none for some time before they commenced to blossom. From what a few colonies did, on which empty supers had been left, I have no doubt that a number of thousand pounds of honey was lost by crowding the colonies the way they were.

I believe the peculiarity of the basswood flow was that year general over quite an extent of territory, for a number mentioned the matter at the time in the American Bee Journal.

I am aware that there are many who consider it unwise to restrict colonies too much as to room in order to get as many sections as possible completed, even if there are poor prospects for the flow to continue, for they regard a large number of sections containing drawn comb as very desirable for use the next season. I have used many thousand sections containing full and partly drawn combs, but I have entirely discontinued their use even for bait sections, for the reason that in this locality at least first-class comb honey cannot be produced in sections containing comb drawn out the previous season.

When the comb-leveler is used, and the combs partly melted down, the honey in such sections may look fully as well when they are filled and sealed, but the old comb is tough and hard compared with new comb, and, besides, some seasons, at least, the honey itself, when put in drawn comb, is not equal to that which is put in fresh-built comb; for the latter is filled more slowly, and on this account better ripened, and has a richer and finer flavor.

Of course, if the comb-leveler is used, and the side-walls entirely removed, there is no material difference between what is left and so much foundation, but with me bees work the base thus left less readily than they do fresh foundation, and after considering all things in regard to this matter carefully, my practice of late is to render all drawn combs in sections at the end of the season into wax. But it is undoubtedly a fact that with drawn, or partly-drawn combs, a good deal more honey can be secured some seasons, possibly some more any season when any surplus is produced—honey that may look fully as well as that built from fresh foundation, but, as I have said, the quality is inferior, and much more so some seasons than others.

I will say for the benefit of those who may be intending to use drawn comb for the first time this season, that it is necessary, when combs are fully drawn or built out, to melt or remove in some way at least a small portion of the outside surface in order to have the honey in such combs appear first-class.

As to the use of bait sections, I believe their value has been over-estimated. I have no trouble about work in supers being commenced soon enough without their use, provided, of course, the yield is such that surplus work can be done. What I consider of great importance in order to have bees work freely and willingly in supers, is to have them so the bees can easily get into them. With some sections and surplus arrangements sent out it is hard work for loaded bees to get into the sections. Southern Minnesota.

Strengthening Colonies by Exchanging Hives.

BY G. M. DOOLITTLE.

The plan of strengthening weak colonies of bees by exchanging the hive containing such colony with one having a strong colony in it, putting each on the stand formerly occupied by the other, is one which is quite generally adopted with good results, and I am askt what time of the day is best to do this exchanging. Some claim that it matters not when the exchange is made, for if made at midnight the bees come out in the morning without realizing any change has been made, and upon returning from the field go to the old location the same as if nothing had happened; hence the weak colony will receive as many bees in this way as they would if moved when bees were at full flight.

Perhaps a little looking into this matter would do no harm. When a colony is in a normal condition the young bees go out to take their first airing at the age of six days, if the weather is favorable; and in doing this they mark their location to a certain extent, but not to an extent great enough so but that subsequent flights have a greater impression on their memory, for we find them taking these markings anew at every flight till they become field-workers, after which they take no more markings during the working season unless it be in the case of a swarm, or some very rude disturbance of their home.

If the hive is moved at midnight, on the coming morning all the bees over 16 days old, upon going to the field leave in a straight line, and having the location establisht in their memory, and not taking any markings that morning, come back to the spot where the old entrance used to be; consequently they go into the hive of the weak colony (if such has been placed on the old stand) or are lost, if no such provision has been made.

But suppose we wait till about 2 o'clock p.m., at which time all of the bees under 16 days old and over six days old will fly if the weather is fine, and we shall find that these young bees head toward the hive the same as they did the last time they were out before, hence notice the change which has been made, and instead of going to strengthen the weak colony which has been placed on the old stand, they return to the spot last markt, hence do nothing toward the desired strengthening. Now, had we waited about this changing till these young bees were in full flight, and moved the hives when the most of these young bees were in the air, we would have caught these also, in addition to all those which were over 16 days old. Then 10 of these young bees are worth 30 or 40 of the older ones for strengthening weak colonies, inasmuch as they are just commencing life instead of being near its close, as many of the field-bees must of necessity be.

Thus it will be seen that if we wish to secure the best results from this exchange of colonies, it should be done when the greatest number of young bees are flying from the hive, for we shall get the old ones in any event.

Onondaga Co., N. Y.

The Plain Section and Fence Separator.

BY G. S. CREGO.

Reading the contribution of J. S. Scott, of Utah (page 224), on the subject of no-bee-way sections, leads me to ask, as a matter of information, in what particular the plain sections are an improvement over the old 1⅞ section, open at top and bottom.

As I understand it, the cross strips on the fence separator effectually shut up the two *sides* of the section, leaving only the ordinary bee-way at top and bottom, with perhaps some advantage gained by allowing the bees to go freely through the separator.

For my own use I have adopted the 1⅞ section open on *four* sides, which allows the bees to run along the separator from end to end, as well as from top to bottom.

To give them still further freedom of action in the super I slot all my separators; that is, with a sharp knife and a straight-edge I cut out a strip ⅜-inch wide the full length of the separator with the exception of about 1½ inches at each end. This slot, being in the middle of the separator, allows the bees to go from section to section *through* the separator. As a result, the comb honey put up in such sections last season was unusually fine in appearance, sections averaging very nearly one pound each all through, and many of them showing no "pop-holes" at all. Having an opportunity to go through the separator the bees seem willing to abandon, to a great extent, their usual habit of going through the section.

I should like to have some of our prominent bee-men try this plan, say with a hive or two, and note results.

Cook Co., Ill.

[As Dr. Miller is accustomed to having questions of all kinds "fired" at him, we sent him Mr. Crego's, and in answer received the following:—EDITOR.]

In answering Mr. Crego's question I may take the opportunity to refer to the article he mentions, on page 244, written by J. S. Scott. One who reads that would be likely to understand that the "Medicine Man of the Marengoes" had advised the adoption of the plain section. I cannot imagine upon what Mr. Scott can base any such idea. I have not decided to adopt the plain section for myself, and would hardly advise any one else prematurely in such a matter. I don't know whether such a thing is advisable or not, but I want to find out. If I think I can make money by adopting the plain section, you may be sure I'll adopt it, otherwise not. I suspect there are advatages claimed for it that will not pan out in actual practice, and on the other hand objections are raised that have no foundation in fact.

I am confident that the "Sage of Medina" is entirely honest in believing that the adoption of the plain separator and fence will lead to material gain on the part of the comb-honey producer. Whatever may be the price now of an irregular style of section, there is no question that if the plain section becomes one of the standards it will cost less than the old style. The claim is made that fences will cost less in the long run than plain separators. I don't believe that is true. On the other hand, I don't believe that there is ground for the objection so persistently urged that inexperienced clerks will make such havoc in handling plain sections. I don't believe there's a man who makes that objection who doesn't handle his sections by the narrow part at the top, where the comb comes just as close to the edge as does the comb in the plain section.

At the same time I believe it's the right thing to discuss fully the advantages and the disadvantages of making any such change, and I am glad Mr. Scott has spoken his mind.

All this is a long preliminary to answering Mr. Crego's question, in what particular the plain sections are an improvement over the old 1⅞ section, open at top and bottom. The one distinct particular in which they are an improvement is the fact that in connection with a cleated separator, whether that separator be plain or fence, the section has the appearance of being better filled, and as a matter of fact *is* better filled; that is, the surface of the comb comes out nearer the surface of the wood. It may be just a little difficult for those who have always used nothing but sections with bee-ways and separators to understand this. The older members of the craft who remember the introduction of separators will have no difficulty. An objection to the adoption of separators was that they gave the section of honey a *lean* look. No one denied that the section had a less inviting look, but the advantage of having sections that were always straight and would make no trouble in packing were so great that the lean look was endured by most, but some have hung out against the use of separators till the present day. Whether the plain section will bring back the desired plumpness of appearance without costing too much, or bringing some other evil in its train, is a question to be answered by actual trial.

I think Mr. Crego is mistaken in supposing that "the cross strips on the fence separator effectually shut up the two *sides* of the section." In the latest fences the cross strips or cleats do not come out flush with the edges of the section, but cut short of that, leaving a passage-way at the corners from one section to the next one abutting against it.

Sections with openings on four sides, as also separators with slots made by machinery, have been in use to some extent for a number of years. C. C. MILLER.

Is a Colony an Organism?—A German Controversy.

BY REV. H. ROHRS.

The American Bee Journal, on page 151, mentions for the first time of an American bee-paper, so far as I know, the controversy that is going on in Germany as to whether a colony of bees is an organism or not, and says that Editor Lehzen, of the Centralblatt, "seems to think time and ink can be better spent in matters of practical importance." Now, I do not coincide with Lehzen, and if the "Beedom Boiler" had studied the question at issue I think he would have made more of this important question—Is a colony an organism?

The old school, with Dzierzon, says: The single parts are (each for itself) one organism; the whole can only, therefore, be called an organic formation.

The new school, with its champion, Rev. F. Gerstung, say: A colony of bees is one organism; the single parts (comb, queen, workers, drones, brood, supplies) are the organized members of the whole. Dzierzon replies: That is all nonsense.

To understand this question better let us first see and hear what an organism is. Webster says: "A being consisting of parts of which the functions of each are essential to the existence of the whole and of each of the parts; a whole, of which the parts are reciprocally means and ends." A horse or a cow is an organism, for it can and does subsist independently, but that cannot be said of the worker-bee, or queen, or drone, or any other part of the colony. Each one must perish if taken from the whole, of which they are only parts, being reciprocally means and ends to the whole.

Every one can see that the new school of Gerstung is right and Dzierzon and his followers are wrong; and all their ridicule and desperate fighting has been of no avail. From year to year Gerstung's friends and followers have increast rapidly. Why? Because whoever has tried his theory and system had more honey to harvest than the men of the old school.

Gerstung has publisht several pamphlets and books—his bee-journal—Deutsche Bienenzucht—has nearly 7,000 readers. I advise every one that is able to read German to get Gerstung's books. By his theory many a riddle is solved concerning the development of the brood, its nourishment, the building of worker or drone comb (the cause of it), of swarming, and of successful wintering. I hope to be able to say more of the last thing in the future. Rock Co., Wis.

An Address to All Colorado Bee-Keepers.

BY R. C. AIKIN.

DEAR FELLOW BEE-KEEPERS:—There comes from all quarters a cry for help. Prices are low, and the questions confronting many apiarists are, "Shall I cease to keep bees?" Or, "How and where can I profitably market my product?"

Suppose you do cease bee-culture what will you engage in that will better your condition? Other lines are as full as ours, and the same story comes from all producers—"too many already in our line of business."

There is not too much of anything produced, surely not when thousands are starving and millions have not any of the luxuries, and millions more have scarcely the necessities. Were the products better distributed, and had the people the *money to buy*, all agricultural products would find ready sale, and we would be happy and count ourselves prosperous.

Of all products that are poorly marketed honey is about the worst of all. You have only to compare it with other things to convince yourselves of the truth of this statement. Cattle, hogs, sheep, wheat, oats, corn and other grain, as a rule, have a market—places in nearly all communities where they can be marketed, and usually for cash. I am not here discussing whether the price paid is just and profitable—almost every one knows of that; but the fact that they have markets and market values. Butter, eggs and potatoes also find a market at almost every grocery, and can be sold at some price in every city or village; but honey—well, it usually begs a buyer everywhere.

In apiculture every man is a law unto himself—produces, grades and packs to suit himself, so that there are scarcely any two lots of honey that are alike—no regularity, either in quality, appearance, supply or demand. We sell our honey wherever we can, and take what we can get, as do more or less all producers. We cannot expect to have full control and get any price we may demand, for tho all apiarists in the world were organized in one united company, there are still the great systems of commerce to deal with, monster combinations and trusts whose objects are to control and manipulate everything within their reach to their own profit, the introducing of our product and getting the people to want it, and the great multitude of things we have to contend with.

It is just as impossible for the individual producer to meet these contingencies as to swim ashore if dropt in the center of Pacific Ocean. The individual producer can do much in his or her own community, produce a good article and introduce it at home, and in so doing help in a three or four fold way. In marketing at home you become more independent of the middle-men, transportation companies, trusts and combines or other agencies whose aim is to sit in ease and comfort, and at the expense of the producer by getting a share of the profits. You make a demand at home that brings to your pocket a portion of the money that otherwise would be sent elsewhere for other sweets that your honey takes the place of. In selling at home you keep that much off the market elsewhere, avoiding in-so-far a glut and depress prices in general markets. Your product being introduced into the homes of your neighbor producers in other lines, educates the people to the use of honey, and so makes a demand that will spread from locality to locality, thus increasing the general demand.

ORGANIZED METHODS.

There are, however, many localities that produce more than can be sold at home, hence must ship. The honey-producer can no more succeed in individual shipping than can the grower of a few cattle, hogs, sheep, poultry, eggs, or the many kinds of grains or farm products. We must sell and ship by organization, or through those agencies that are in a position to find out, and whose business it is to know when, where and how to get the product to the place of demand, to introduce and make demand where there is none.

The Colorado State Association was organized to aid its members and our pursuit. It has already been a great help to many apiarists, and is now at work to accomplish much more; and if the apiarists of the State will come in at once they will be surprised at what we can and will do.

While much has been done by the Association, much more that has been planned has failed for lack of a little help from all interested. It was through the efforts of the Association that we got a foul brood law. Part of the State that is the most thickly populated with bees, and where the disease has existed for years, through the aid of the law has been saved from the ruin of its apiaries.

We have now undertaken to do more than ever before, by taking hold of the marketing matter. This Association is still looking after the matter of legislation, and propose to guard the interests of the apiarists of the State along that line, but the matter of marketing is a very vital matter just now, and demands our attention.

Fellow apiarists, it is impossible for us small producers, shipping independently, to combat the many contingencies that confront us. Even the largest producers in the State are almost helpless in the general markets. So gigantic is the matter of conducting commerce, transportation and distribution of products and manufactures, that any person or organization handling or shipping goods in less than car or train lots is scarcely noticed.

It would take almost volumes to elucidate these matters in detail. The statements offered ought to show you the need of doing something, and that quickly. Don't say it is no use for you to become a member of the State Association because you live so far away you cannot come to Denver to attend meetings. It costs you just 50 cents for a year's membership. There surely are 500 bee-keepers in the State who ought to be members, and if they were, we could do much more for you. Just an advance of one cent per pound on 50 pounds of honey pays the bill, and if you cannot attend you can *vote* by proxy or written ballot. Ladies' membership only 25 cents.

Friends, a few of us have for years kept the organization alive, paid our annual dues, attended meetings at our own expense for car-fare and hotel bills, watcht over the interests of bee-keepers at the cost of time, labor and money. Won't you now send your name and fee and become members? The fees will help us in printing expenses, in hunting out adulterated goods and having them analyzed—some such work having already been done. There are postage and stationery bills to pay.

We are now hard at work trying to get the marketing done by our own Association where all bee-keepers will have an equal chance. We propose to fight adulteration and other evils, and do you good. Help us by your means and your influence, and thereby help yourselves.

Carefully read this and all matter which we send you, and sign and return promptly such as is calculated to be so used. Do not neglect the statistics. We want to know the resources of the State, and we want to put our honey in many markets. Colorado honey sells wherever it is introduced. There is probably not a State in the Union that has better honey than ours, and a little push in marketing will sell it wherever it goes.

Your membership in this Association will get your reduced rates on supplies. We now have rates that will save you much more than your membership fee, even tho you buy but a very few goods.

We propose to do something, and while we are helping the members of the Association we are helping all apiarists more or less; but you ought not to expect others to labor for your good without helping some, nor can you get nearly so much good outside the organization as if members.

All moneys are accounted for at each annual meeting, and each member has the privilege of examining the records, and may know how the funds are used. Could we afford it—and we could if all would support the Association—printed statements would be sent out to all members so that all might know just what was being done; but as yet we have not had the means to do this, hence only those in attendance at the annual meetings hear or see the complete reports.

Again I appeal to every bee-keeper in the State to promptly send to our Secretary your membership. Write to him anyway. Ask for information. Send names of every bee-keeper you know of. Get others to join with you. Colorado is a big State, has lots of apiarists, much honey of fine quality, and can, will, and must show what she can do.

LATER.—Since the foregoing was written another meeting of the State Association has been held. At this meeting there was a unanimous vote to sustain a marketing organization. Now a little thought will convince all that a committee of five or six members will not be able to organize a marketing concern without some of "the substantial" in the way of capital, and since the State Association has not the funds in the treasury, and the committee have no specific orders from the Association to so use Association funds, nor as to the form of the organization, nothing can be done in the way of carrying out this work officially as a part of the State Association work. The time is ripe for something to be done, the Association have unanimously voted to support a move of the kind, bee-keepers all over the State have signified their desire for something to be done at once, and their willingness to help, we therefore expect to go ahead and get the matter started. After the machinery is going the State Association can then take up the matter at a later convention, and so make it officially the Association work. As it now stands the committee only have delegated to them a limited power, and to act to the full carrying out of the matter must do a considerable part of it on their own responsibility.

Now, friends, some capital is needed to start this matter. Let every member of the Association who will take a few dollars of stock write me at once and tell me how much you wish to put in. Also every Colorado apiarist who reads this write me even if you are not a member of the Association; tell me how much you are willing to put in, either of cash or honey, or both, to start the thing. Our committee will soon have a plan formulated upon which to begin operations, and a copy will be forwarded to those wo wish to take stock. You are not askt to pay a cent into the matter till you have seen the plan in print, and I agree to send the plan to those who will send in membership fees to the State Association, or to others who wish to take stock. Editor York cannot afford to print this, nor I to send it out, without some compensation in some way, so be sure when you write to put in at least one stamp. I do not know what the editor will charge me for putting this in the American Bee Journal, but I am going to risk it for the good of the cause, and if I have a bill for advertising to pay—it is really an advertisement for Colorado apiarists—I guess I can pay the bill if the brethren will not help me out.

Now, friends—those of you who read this and are not now subscribers to this paper—just send your subscription to Mr. York, and while he has never said such a thing to me I feel sure he will let me off without any pay for printing this, tho I expect to compensate him for its publication. In sending subscriptions say you do it in reply to this appeal. The honey season is close at hand, and what is done in this marketing matter must be done quickly, so be prompt in sending your communications to me. R. C. AIKIN,

President of the Colorado State Bee-Keepers' Association.

Loveland, Colo.

Improving Bees—Foul Brood, Etc.

BY C. A. BUNCH.

The only practical way to improve the working or honey-gathering qualities of our bees is to breed from colonies that will store the most honey. If this is followed out we need not go to the bother to measure their tongues.

For this locality I believe it very essential to have a strain of bees that will work well on red clover, for last season there was scarcely any honey gathered about here in the month of June except red clover honey, of which I took in the extracted form to the amount of 600 pounds, one colony storing some over 60 pounds of this honey before basswood came into bloom—being the largest amount of red clover honey gathered in one season by one colony of bees that I know of, while the average of red clover honey per colony was but 30 pounds.

I breed several strains of Italian bees, but I have no queens for sale. I wintered 89 colonies out of 91 on the summer stands.

Separators or no separators, fence or no fence, plain sections or sections with bee-ways—well, it puts my head in a twirl. The finest comb honey put on this market is produced by a bee-keeper that never uses separators or fences, but uses plain sections set a bee-space apart in the super. Bees go all around the sections except where they rest on the bottom of super. All the first-class grocerymen here know Deitel's fine comb honey stored the way I have mentioned.

Query :—Is there a bee-keeper on earth that can use two 8-frame Langstroth hives, one on top of the other, with sections above, and have anything like success at producing comb honey? If such a one lives, let him tell us how it is done.

Foul brood—a caution: I have never seen foul brood, but I fear it as something awful, and as a measure of safety when receiving queens by mail I let the queen out in the shop on the window, then catch and introduce her with one of my own cages, and burn the cage I received her in.

Marshall Co., Ind., April 28.

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Some Wintering Experiences—Various Notes.

BY O. B. GRIFFIN.

It is with much interest that I always turn to Dr. Miller's department of the American Bee Journal. It is particularly helpful to the beginner, and even the veteran must get some new ideas, and reminders of what they may well know, but through attention to many cares would neglect but for the questions askt by those who have just entered the fields they have already past over. As I class myself with the beginners (tho I have owned and cared for bees nearly 10 years, never having over 20 colonies at one time), I hope the Doctor will not think me presumptuous in attempting to throw light on questions he has already replied to.

As there is a cause for everything, and also a remedy if we can but find it, I have always tried to find them when I have been confronted by anything that was detrimental to the successful care of bees.

The winter problem has given me more trouble than any other with which I have had to wrestle. When I was younger, and knew less about bees than I do now (which is little enough), I built a repository in which to winter my bees, very similar to the one described by "Wisconsin," on page 38. I had it arranged so that it had excellent drainage and ventilation as desired. That winter I placed therein 17 colonies of bees with plenty of stores, but quite a percentage of the stores was "honey-dew." Only six came through alive. Five of these were very weak and queenless, so I let them "peter out."

As I had been to considerable expense, and believing the honey-dew to be the chief cause of the failure to winter, the next November I again put in three colonies—one a choice Italian—and all with plenty of well-capt white honey. During the winter the mercury in cold spells would drop to 36°—at times it would reach the freezing point. At such times I would warm it up to 40° or 45° with an oil-stove, but in the spring all were dead.

The winter of 1896-97 I wintered bees in the cellar under the house, and they came out strong. I had five colonies in the same cellar the past winter, and tho the temperature remained near 40° (never below) they wintered finely. I could lift the cover and hold a lighted lamp near the hive without disturbing them.

From my observations I have come to the conclusion that the wintering problem for northern latitudes is solved, if the following requisites are closely observed :

1st. Healthy bees and plenty of pure white honey, or pure sugar syrup fed early in the season, if honey is a failure. From my own experience, which is somewhat limited, I give honey the preference. I would not extract honey from the brood-combs and feed sugar unless the honey was of inferior quality. In such cases I think it best to do so every time. But syrup should be fed early enough so as to be nearly all capt before cold weather sets in.

2nd. A dry cellar, or any other repository where an even temperature of 40° to 45°, or that temperature at which the bees are quietest can be maintained without the aid of artificial heat.

3rd. Last, but not least, pure air and quiet.

I do not think "Wisconsin" can be successful with the repository described, for a term of years. If he is, I hope he will report occasionally.

Somewhere—I think in Dr. Miller's department—I saw the question askt, why bees sometimes store so much pollen in the sections. I have had several bad cases. They occurred under these conditions :

A prolific queen, with brood-frames crowded with brood and little honey, with very little pollen. As pollen was needed they stored in the next nearest available place—the sections. I have had the most trouble in hives having small brood-chambers. The remedy would be to give such queens more room below.

FINDING BLACK QUEENS, ETC.

I have always had lots of bother in finding black queens in populous colonies. Last season I hit upon the following plan, which may help beginners where frame hives are used :

When the weather is warm enough so there is no danger of brood being chilled, take several hives—or prepared boxes that frames will fit—and proceed thus :

Move the old colony a short distance from the old stand and set an empty hive in its place. Set the empty hives near, and after using a little smoke open the hive and take out all but two or three frames, one at a time, glancing over them if you wish, as the queen may be seen. Set two or three frames in each hive, and cover up. In a few moments there will be excitement in all the hives except the one containing the queen, and the bees will be returning to the old stand.

Take the frames from all except the quiet hive and return them at once to the old stand; then proceed to find the queen. There is not much trouble to find "her majesty" when you know she is on one of two or three frames. This really takes less time than it does to write it.

I shall agree with the Editor (page 152) that it is a mercy to "Miss Flora" that her address is not given. Methinks some who might better be clast with the "old baches" rather than young bee-keepers, would be sending her flowery notes, and "hanging around" the postoffice awaiting replies. I am quite sure that if I lived near J. A. Golden's, I should be very much interested in that section-honey cleaner.

Say, Dr. Miller, are you not leading "Youngster" and "Tennessee" to expect too much of mortal woman, or is there all that difference between the women of Illinois and Maine? Why, if there was such a girl living near me I would go to her at once and ask her to—well, never mind what, but I should insist upon an answer in the affirmative before I came away.

I hope Editor York will not put the latter part of this article among the advertisements and send me the bill; for, tho like "Bachelor Hasty" and that Whitebread fellow my hive is "queenless," it is not intended as an advertisement.

Aroostook Co., Maine.

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for $1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at $1.00), and 10 cents extra.

The Wood Binder for holding a year's numbers of American Bee Journal, we propose to mail, postpaid, to every subscriber who sends to us 20 cents. It is a very simple arrangement. Full printed directions accompany each Binder. Every reader should get it, and preserve the copies of the Bee Journal as fast as they are received. They are invaluable for reference, and at the low price of the Binder you can afford to get it yearly.

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all others possible to subscribe for it.

CONVENTION PROCEEDINGS

Proceedings of the Colorado State Convention.

REPORTED BY F. L. THOMPSON.

[Continued from page 294.]

The committee on supplies reported that low prices had been offered by supply firms. It was voted to refer the matter to the Executive Committee for action. (The prices quoted are only made to Association members.)

Mr. F. L. Thompson next read the following paper, entitled,

Conditions of the Pursuit in West Colorado.

From what I could learn it seems that bees winter better there than around Denver. This may be due to the less rigorous winters, from which our low drops of the thermometer and northern blizzards are said to be absent; or it may be due to a better chance for development at the critical time in spring, or both. I arrived there too late to judge of the latter point, but noticed that the bees were busy enough at something to keep them out of serious mischief from that time until the main flow, which commenced June 11—a week earlier than at Denver. Fruit-bloom was abundant while it lasted, and in future years will doubtless greatly increase, as the neighborhood of Montrose is pre-eminently a fruit country.

A few bee-keepers down the river secured quite a fair yield from wild flax, which has never before given a surplus since the country was settled. I was told that the river-bottom gave a better flow of honey during the first half of the season, and less during the second half, than the mesa, on which I was, and I found it so last season. A high wind which prevailed during most of the first crop was exceptional, I was informed. I sincerely trust it will not occur again; for few things are more exasperating to the bee-keeper than a prolonged wind in the honey-flow. My average per colony, spring count, was 47 pounds of comb honey, which I was told by some was rather a poor yield, tho as usual in most localities there was some difference of opinion as to what constitutes an average yield. But I believe it has not gone below 40 pounds.

Swarms were abundant, and the Heddon method of preventing after-swarming but moderately successful with me—in fact, something of a failure. While the colonies were very strong at the opening of the first crop, they had dwindled rather more when the second crop came than I ever observed them to do around Denver. This trait of the Italian bee—of curtailing brood-rearing—is well enough for a single flow, but is certainly undesirable for Montrose county.

Foul brood has never existed in the county.

Alfalfa is the main dependence. Some autumn honey-yielding plants, as here, seem to vary the character of the honey. A hundred-acre field of Alsike near one bee-keeper gave him more of a variety. I tasted some comb honey which seemed to be from that source, and while it was not bad, I should prefer white clover, which I once tasted. I noticed a few scattering plants of cleome, and was told that off to the southwest there was considerable of it, but I do not know that it figures much in the honey-yield. Sweet clover and scattering alfalfa, and chico—a very abundant shrub, blooming throughout the season—bridge over the interval between the two crops at the rate of perhaps a pound a day.

The phenomena of the granulation of comb honey are about the same as here. First-crop honey properly kept does not, I believe, as a rule, granulate before it is consumed. The bulk of the second crop can also be sold without any particular hurry. But the latest honey is strongly inclined to granulate quickly. It is interesting to note that one bee-keeper there has observed just what has been observed elsewhere, namely, that early alfalfa comb honey gathered in damp weather does not granulate at all, but when gathered in dry weather is more inclined to do so, tho, as I have said, it does not as a rule granulate before being consumed.

The first-crop honey is second to none in color. The second-crop is so distinct in appearance that it can be told at a glance. It is not dark, but is unmistakably amber. One Montrose bee-keeper says that years ago both were white, and attributes the change to the weeds which cultivation has brought. Another thinks the difference in color of honey is analogous to the difference in the color of the hay of the two crops of alfalfa, the second crop being a darker green.

Local freight-rates from Denver to Montrose are $1.10 a hundred on bee-hives in the flat, and a cent a pound for honey from Montrose to Denver. Foundation of good quality can be procured there as cheaply as here, and last year the same was true of sections. But shipping-cases were 17¾ and 18 cents, and weighed almost five pounds apiece at that. Montrose being situated on a narrow-guage railroad, shipments outside of the State have to be reloaded at Salida.

The greater part of the honey appears to go to Kansas. Those who preach that to sell outside of the home market is a sin, ought to produce honey at Montrose. They would be effectually cured of that propensity. Farmers' honey is produced in quantities sufficient to more than supply the whole county, and the teams with farm products which constantly go up to Ouray and Telluride keep those towns supplied with this farm honey. Gunnison is but a small town, and Leadville and Aspen are more directly controlled by the Grand Junction district. Salida is much nearer Pueblo than Montrose. The southern towns—Durango, Rico, Silverton—are supplied with honey from southwest Colorado, much of it being farmers' honey.

On account of the inevitable shipments and the high freights I should not advise any one who owns an apiary in an ordinary location in eastern Colorado to pull up and change to the western slope.

I have been askt to add to this paper some remarks on the importance of the honey-industry of Colorado.

F. L. THOMPSON.

[The "remarks" referred to above will be given next week.—EDITOR.]

[Continued next week.]

Does this Mean You?—It does if your subscription is in arrears. In the Rural Californian for April we find the following editorial paragraphs:

THE UPS AND DOWNS OF NEWSPAPER LIFE.

It may be that the ups and downs of newspaper life nearly balance each other, but there is considerable evidence that the "downs" are more frequent than the "ups," as they are surely more difficult to bear. Be this as it may, a disproportion can easily be establisht, and the solution is largely in the hands of subscribers. The subscription to a newspaper or magazine is a very small amount. The usefulness of the periodical is almost invariably far beyond its price. Subscriptions which are not paid promptly, or on which a percentage must be paid to cover cost of collection, postage, etc., represent a very little net income to publishers. The benefit to them, as well as to readers, would be greatly increast if subscribers were always to pay promptly in advance and renew without frequent solicitation.

Life generally has so many "downs" that many people must walk on their "uppers." The high road to prosperity is a delightful one to travel, but it is very high and rarely reacht in these days.

The charm of newspaper life is rather in the editorial end, not in the business department, for debts are sometimes pressing the manager while the delinquent reader is forgetful that his attention might bring relief. The "ups" in the newspaper business really belong to the readers; the cares of the newspaper business do not attach to them.

If there is one thing that we dislike to take up our editorial space with it is the request that subscription arrearages be paid. And it is hardly fair to those who always do pay in advance, to occupy that space with calls on those who are delinquent. Of course we *could* stop off short every subscription when it expires, but very many wouldn't like to have us do that—they'd think we certainly could trust them for a few months or a year. But that means a good deal to us when two or three thousand think the same way, and do not pay.

Again, we could send a personal letter to each delinquent, say once a quarter, but that means an outlay of from $50 to $75, which could be so much better spent in getting more engravings for the Bee Journal, using a better quality of paper on which to print it, etc. Say, why not *all* who are behind in their accounts just pay up without a private request, and thus help make a better paper, and also make it easier for the publishers? GEORGE W. YORK & Co.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Wintering Bees Under a Shop.

Would it do any harm to winter bees in the cellar under a shop with a single floor under the shop where there is pounding? MICHIGAN.

ANSWER.—It will probably be a good place if the cellar isn't too cold.

Yellow vs. Darker Bees.

I have lots of combs in fair condition, and if I could get a pound of bees and queen of the yellow kind, would they be as hardy as the dark Italians so far North? MAINE.

ANSWER.—Some say they are as hardy as the darker ones. Others, and perhaps a larger number, say they are more tender. Very likely they are not all alike.

Queen's Piping, Etc.

1. Does a queen make the piping sound with her wings, or voice?

2. I opened a hive and found an empty frame of comb, and put it by the frame the queen was on so that she would go on it to lay next. Having a frame like that paid for all the trouble it made the bees, did it not? KANSAS.

ANSWER.—1. With her voice. She'll pipe just as loud after every vestige of a wing is cut away.

2. Very likely, supposing the empty frame took the place of one filled with honey and you didn't put the frame between two frames of brood.

Laying Eggs in Bunches.

I have one colony of bees which was rather weak in the fall, and seemed to work all right in March, but it is growing weaker every day. I lookt into the hive and found only about 100 bees in it. The queen is young, from last summer, but she lays her eggs in bunches, from 5 to 20 eggs in each cell; also, I found some chilled brood. What shall I do with the queen? Is she any good, or does she lay her eggs in bunches because there are not bees enough to take care of all of them? NEBRASKA.

ANSWER.—The queen may be all right, and she may be all wrong. By the time this reaches you probably some of the brood will be sealed. If it appears flat, just like the most of the sealed brood in the other hives, she's all right. If, on the other hand, the sealing looks like a lot of little bullets laid together, the brood is all drone-brood, and the queen worthless. In any case, if only 100 workers are present it's hardly worth while to try to keep them, and the best thing will be to unite them with another colony.

Cleaning T-Tins.

How do you clean your T-tins? You seems to have an easy job of it, and altho we use lye we can't get them clean in one-fifth the time you do. I like T-tins, but I do not like to clean them. COLORADO.

ANSWER.—There's very little to tell. The probability is that failure to succeed perfectly would come from one of two causes: Either the lye wasn't strong enough, or it wasn't hot enough. The lye must be boiling hot, and kept boiling hot while cleaning the tins. We used a metal tub on a gasoline stove. Filled the tub ¾ full of water, brought it to a boil, put in three 1-pound cans of concentrated lye, and were ready for operation. Put in as many T-tins as the tub would hold. In two or three minutes they were ready to take out. With a pair of tongs they were stirred a little so the lye would reach every part, and as soon as they lookt clean they were lifted out into a tub of clear, cold water. This rinst them off and they were put into the boxes in which they were to stay, the boxes being set on end in such a way that the water would drain off readily. But they were not lifted out of the rinsing water immediately, for the first thing to do after lifting them out of the hot lye was to fill up the lye with a fresh lot. This cleaned 2,200 T-tins and was strong enough to clean more if we had had them. If they don't lift out of the hot lye perfectly clean, you may be sure it isn't strong enough.

Now, I've told *all*, I think, and wish you'd tell us why you don't use section-holders instead of T-supers. One reason I like T-supers is because the T-tins are so easily cleaned.

Moldy Combs.

I have five colonies of Italian bees, and wintered them all in the cellar. They were in good condition in the fall when taken in, and now I find all are doing well with the exception of one colony, which has mold on one of the outside frames in patches all through the comb, and in small patches near the bottom of some of the other frames. There is no brood except on two or three of the frames. What caused the mold, and what shall I do with it? Should I cut off the mold, or put in new foundation?

ANSWER.—No, don't cut out the mold. Just let it alone and the bees will take care of it all right. The mold came there just in the usual way because the cellar was not ventilated quite enough. The other colonies, being stronger, kept their hives better ventilated.

Young Bees in the Super—Rag Smoke.

1. I have a colony of bees I would like to know what to do with. I left the 60-pound super on it all winter, and lookt at it the other day and found it filled with young bees. What will have to be done with them?

2. Is rag smoke injurious to the bees and honey? If so, what is the best to use in the bee-smoker? NEBRASKA.

ANSWER.—1. Depends a little on circumstances. If the super has frames the same as the brood-frames below, then you can do nothing better than to let the bees continue to occupy them, taking away the lower story if you think it has too much room. If, however, the 60-pound super contains sections, then you must work the bees out of them. Make sure that you get the queen into the lower story, put a queen-excluder between the two stories, and in three weeks all the worker-brood will be hatcht out, when the super can be taken away.

2. Rag smoke is all right. Of course it isn't a good thing for you to smoke them more than is necessary, and if you use too much smoke on honey it will taste of smoke.

Cage for Mating Queen—Jumbled-up Combs.

1. Is there any contrivance for caging a young queen after she hatches, and while being mated?

2. I have three colonies in good Langstroth hives (they are brown bees,) but I used no brood-foundation and they are all in a jumbled-up condition. It is impossible to get the frames apart. I want to give them frames this spring with foundation so as to be able to handle them in a more business-like manner, also to requeen with Italian queens. In what manner can I do it to get the best results, and at the same time get some increase in swarms? ILLINOIS.

ANSWERS.—1. Surely not, for the queen is not mated in confinement, but out in the open air. If you can get up any way to have a queen mated while caged, your reputation, if not your fortune, will be made.

2. Perhaps as good a way as any is the following: Wait till the colony swarms, and then hive it on frames of foundation, setting the swarm in place of the old colony, and setting the old hive in a new place. It is possible there may be a second swarm in about eight days after the first. If so, hive it also on foundation, setting this swarm in a new place. Twenty-one days after the issue of the first swarm, drum out all the bees, queen and all, hiving them on foundation, and then cut out and melt up the combs. It will probably be more profitable for you to have only the one swarm from each colony, and if that be your desire, set the first swarm on the old stand, and put the old hive close beside it. A week later move the old hive to a new place. Then 21 days after the time of the swarm, drive the bees out of the old hive into a new one.

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

EXECUTIVE COMMITTEE—Pres., George W. York; Vice-Pres., W. Z. Hutchinson; Secretary, Dr. A. B. Mason, Station B, Toledo, Ohio.

BOARD OF DIRECTORS—E. R. Root; E. Whitcomb; E. T. Abbott; C. P. Dadant; W. Z. Hutchinson; Dr. C. C. Miller.

GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 38. MAY 19, 1898. NO. 20.

EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Shipping Bees by Freight in less than carload lots is something greatly desired by many bee-keepers, and we believe that when the railroad men having in charge the arranging of freight rates once see the wisdom of permitting bees in hives to be thus shipt, they will speedily grant the request,

At the last meeting of the Wisconsin Bee-Keepers' Association, Mr. H. Lathrop was appointed a committee to investigate this matter, and at once wrote us to see what could be done through the Western Classification Committee whose headquarters are in Chicago. Upon explaining what the bee-keepers desire along the line indicated, to Mr. G. S. Crego, who is a bee-keeper in the employ of the Classification Committee, he suggested that bee-keepers at once write Mr. J. T. Ripley, Room 604, Great Northern Hotel, Chicago, Ill., the Chairman of the Committee, telling him just what is wanted, and giving as many good reasons therefor as possible.

There is no more reason why bees should not go by freight in less than car lots than that live poultry should be limited to carload shipments. Bees can be safely and securely confined by the use of wire-cloth; and of course railroad agents should be careful to see that they are properly enclosed in the hive before accepting them as local freight. But we are not at all fearful that shippers of bees would be careless in this regard.

It will be necessary for bee-keepers to communicate *at once* with Mr. Ripley, as the next meeting of the Western Classification Committee is to be held June 14, at Colorado Springs, Colo. If favorable action is taken upon the subject there, it may be in time to be of some service to bee-keepers during the present season.

It will be highly advantageous, we think, to have Mr. R. C. Aikin, President of the Colorado Bee-Keepers' Association, appear before the Committee at its meeting, for the purpose of answering any questions they may wish to ask in reference to the subject under consideration. We suggest Mr. Aikin as he is head officer of a large State bee-keepers' organization, and also because of his nearness to the place of meeting of the Committee.

We would also suggest that Hon. Eugene Secor, General Manager of the United States Bee-Keepers' Union; General Manager Newman, of the National Bee-Keepers' Union; and the Presidents of all other bee-keepers' societies write Mr. Ripley *at once*, so that he may see the desire is general on the part of bee-keepers to have such action taken by the railroad companies as shall permit the shipping of bees by freight in less than carload lots. The transportation lines will gain by the change, for the high express rates on bees practically prohibit the doing of much business in the way of shipping full colonies.

We believe that with the proper effort put forth now, bee-keepers can secure all they desire in this matter. Mr. Ripley, the chairman, is a broad-minded man, and the Committee itself we doubt not is composed of men who will be glad to favor bee-keepers, especially when they see that it will be to the decided advantage of the railroads to grant the petition presented.

◆

The McDonald Relief Fund.—On page 280 we gave the first installment of contributions to this fund. The list stands now like this:

Former Amount......	$22.00	Roderick McKenzie....	$1.00
Sent direct to Mr. M.	19.70	S. P., Uniontown, Pa..	1.00
Joseph Uebele........	1.00	Reinhold Liebau.......	1.00
Volstad Bros.........	1.00	R. G. Vaus (Canada)...	1.00
G. S. Carpenter......	1.00		

This makes a total of $48.70 that we have now reported in the Bee Journal. Mr. McDonald was a Shawneetown bee-keeper who lost his all in the great flood there about two months ago. Contributions are being received by C. P. Dadant, Hamilton, Ill. Send to him what you can afford, if you wish to help a worthy fellow bee-keeper.

◆

The United States Bee-Keepers' Union.—In answer to our question on page 233, General Manager Secor has this to say:

On page 233, Prof. Cook is quoted as saying: "I think we should all unite on *one* Union, and *that* the one that would fight *every* enemy to the knife" That's just what I think, too. I have been keeping my ear to the ground listening for the tramp, tramp, tramp, of the fifty thousand volunteers who are supposed to be rushing to join this Union army.

Isn't the platform of principles broad enough for all to stand upon? Here's the vital clause:

"Its objects shall be to promote and protect the interests of its members; to defend them in their lawful rights; to enforce laws against the adulteration of honey; to prosecute dishonest honey commission-men; and to advance the pursuit of bee-culture in general."

It appears to the writer as tho about ninety-nine out of every one hundred bee-keepers are very willing to let the other fellow do the hard fighting while they quietly enjoy the fruits of the victory.

But says some one, "As yet it [meaning the Union] has only talkt."

What more could you expect it to do, pray?

In the first place, the infant is only about a year old. It is just learning the use of its legs. If it has learnt to "talk" before it could walk there are some hopes for the child—only precocious children do that.

But, really, does any one think that the General Manager can fight "to the knife" all the enemies of all the bee-keepers in this country without the "sinews of war?" Or is it supposed that one bee-keeper is capable of fighting the battles of ninety and nine who are safely sheltered in the fold of inactive security? Nay, verily. Don't ask us to. Three hundred Spartans defended the pass at Thermopylæ, but there is no such narrow defile through which the enemies of the bee-keeper are obliged to march. We need outposts on every side. If we give the adulterators "war to the knife" the dishonest commission-men will form in our rear, and the sweet clover cranks will attack our right flank.

'Tis a plucky four hundred that have already enlisted, but they need more support.

And something *has* already been accomplisht, altho we haven't gone about it with the blare of trumpets accompanied by newspaper reporters.

I have noticed that the best lawyers are not the ones that talk loudest to the jury, or who try to amuse the spectators.

It is pretty generally believed that the walls of Jericho would not fall, now, by marching around the city and making a noise.

It takes powder or dynamite nowadays to reduce the works of the enemy.

If any one knows of a good lawyer who is devoting his best energies to his profession "for his health," I shall be glad to enlist his sympathies in our cause, but I hope no one will expect me to find such an one "lying around loose."

The United States Bee-Keepers' Union can be made the strongest defensive bee-keepers' organization in the world if the intelligent and thrifty bee-keepers of this country will unite.

An organization with a thousand members is a hundred fold stronger than one with a hundred.

The letters coming to this office develop the fact that there is need of a "union of hearts and a union of hands."

The Board of Directors is composed of men of experience and ability, and they are your friends. If they don't turn the world upside down the first year of their official life, don't lose your faith in the power of organized effort.

EUGENE SECOR.
Forest City, Iowa. *General Manager.*

Those of our readers who have not as yet joined the United States Bee-Keepers' Union should read over what Mr. Secor says above, four times at least, and then send their fee of $1.00 to him to help create the defense fund—the "sinews of war" so often mentioned.

We should be glad to hear from the Board of Directors now. Have they anything encouraging to say? We believe in agitation, and think that the New Union should be kept before the bee-keepers in some form constantly. If its objects can be successfully carried out it will mean much to the cause of American apiculture. But to do that, there must first be put *in* sufficient ammunition to move things when General Manager Secor wishes to "touch off" the Union's "gattling gun." If we ever expect Mr. Secor to be a Dewey in the war to be waged by bee-keepers against their enemies, they must supply him with the munitions necessary to push the fighting to the bitter end.

The Apiarian Display at Omaha during the Trans-Mississippi Exposition promises to be the largest and best ever witnest. Commissioner Whitcomb wrote us April 28 that the apiary building was then nearing completion. The building is 128 feet by 75 feet, and after Swiss architecture, well lighted on the sides, ends, and from the roof. The cases for the exhibition of honey are located the full length of the building on either side, four feet wide, and arranged so that when the exhibits are in place they can be seen and admired from the outside as well as from the inside of the building. To protect them from the rays of the sun, awnings can be let down as occasion requires. The tops of the exhibition cases are of glass, so that the light from above will in no wise be obstructed.

The entire floor-space, exclusive of passage-ways in the center of the building, will be devoted to the exhibition of bee-keepers' supplies, and for such exhibitors who desire to erect their own honey-cases. Sufficient space has already been taken in this building to insure the grandest and most attractive honey and supply exhibition the world has ever seen, and the expectations of its projectors will in no wise fall short.

By the efforts of Commissioner Whitcomb, applications will be left open to those who desire to secure space to the shortest possible time prior to the opening, June 1, in order that no one may be shut out who desires to participate in this part of the Exposition.

The buildings and grounds must be seen to be fully appreciated. Douglass county, in which Omaha is located, has taken 300 feet of space in which to show the wonderful honey products of that county alone, and Mr. Aug. C. Davidson, Vice-President of the Nebraska Bee-Keepers' Association, has been appointed in charge. Every grade of honey, wax, sweets, and all kinds of supplies have been cataloged for award, so that any one who has a meritorious article may have a fair opportunity of securing proper recognition when the jury of awards make their examination.

Mrs. Whitcomb has devoted considerable time to the preparation of a wax exhibit, and while we are not at liberty to state what it is at this time, yet we can safely say from what we know of Mrs. W.'s ability, that it has never been equaled, and, like the buildings, must be seen to be fully appreciated.

In the opinion of many who are prominent in the United States Bee-Keepers' Union, no time should be lost in locating the next meeting at Omaha. They feel that as good rates may be secured to Omaha as can reasonably be expected anywhere, and without the danger of being lost in the hurrah of war or an old veterans' reunion. At Omaha the bee-keepers of the East and West can meet on ground accessible to all, and hold such a session as has never before been held. But it is only a question of low railroad rates, which *we* fear cannot be secured—at least not as low as the Grand Army secures to its meetings, and this year they go to Cincinnati, Ohio.

California Notes.—Prof. A. J. Cook sent us the following, May 4, in reference to the honey crop prospects in Southern California this year:

The white sage (Ramona polystachyæ) and the black sage (Salvia mellifera) are now in full bloom, but curiously enough very few bees are seen on the flowers. The light rainfall makes nectar-secretion very slight. It looks as if there would be very little honey secured this season, except in places where alfalfa bloom can be counted on. It is to be hoped that in Ventura county beans may help the bee-keepers to secure a crop.

We have just had a nice rain of over one inch. It is too late to help the grain crop, which is almost a total failure; and it is to be feared that it will not help the honey crop. It seems to be the consensus of opinion among our experienced bee-keepers that abundant early rains are a *sine qua non* to a large honey crop. The bee-keepers are despondent this season, but they have abundant company. Owing to drouth and frost, the grain and fruit men are equally unfortunate.

A. J. COOK.

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 20 cents; 100 for 35 cents; or 200 for 60 cents.

The Names and Addresses of all your bee-friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums we are offering. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year —both for $1.10.

☞ See "Bee-Keeper's Guide" offer on page 300.

THE WEEKLY BUDGET

H. G. Acklin, of Ramsey Co., Minn., wrote us May 10:

"Bees are doing well, and the prospect for a good honey crop is good."

Mr. W. B. Chapman, of Orange Co., Calif., writing us April 24, said:

"The honey crop will be *non est* here, and bees will starve out for a certainty. Give us plenty of news of what the other fellow is doing, to keep our spirits up."

Mr. John Doty, of Grundy Co., Mo., who is a 74-years-old bee-keeper, wrote us as follows, May 12:

"Bees are all right and doing well. I have 70 colonies: had 38 last spring, secured 4,000 pounds of surplus honey, and increast to 75 colonies."

Mrs. Mate L. Williams, of Wadena Co., Minn., reported May 11:

"My 70 colonies came out of winter quarters in fine condition, and the weather has been very favorable so far. They are building up very fast. Very many hives are about full of bees."

Dr. C. C. Miller spent the night with us Monday, May 9, when on his way to attend the 40th annual convention of the Illinois State Sunday School Association, which met at Galesburg, last week. Tho in his 67th year the Doctor is as light-hearted and jolly as a youngster. But he is a very busy man. With his nearly 300 colonies of bees, and all the writing he does for the bee-papers, for the next few months he will have to work about 18 hours a day. We hope he will not overdo. Bee-keepers can't afford to let him off—not even to take a well-earned rest.

Mr. L. Kreutzinger, of Cook Co., Ill., who has two apiaries near Chicago in charge of Mr. J. T. Hammersmark, wrote us as follows, May 12:

"Your kind attention is called to the fact that the 'observatory' at my apiary, recently built, has been equipt with the newest improvements and appliances for the purpose of properly testing any kind of modern inventions pertaining to apiculture. Any new production, design or improvement of modern apicultural implements and fixtures will, if sent for that purpose, be subject to a careful examination and practical test in order to ascertain and establish their usefulness and merit."

Should any of our readers desire to send anything as suggested, they can forward it to us, being sure to prepay all charges.

Mr. H. H. Buckman, of Bucks Co., Pa., wrote us May 9:

"My bees commenced swarming this morning, and are in good condition."

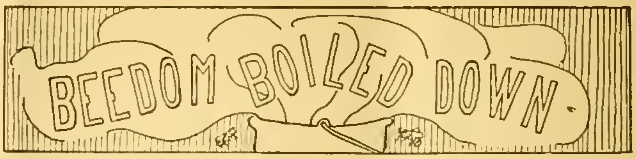
Mr. A. D. Fink, of Jewell Co., Kans., when renewing his subscription, May 9, exprest himself as follows:

"The American Bee Journal is the paper for any person who eats honey, who is contemplating going into the business of rearing bees and producing honey, or who is in the business, and who loves to study the habits of bees."

Mr. J. H. Martin, of Los Angeles Co., Calif., wrote us May 3 to send his copy of the Bee Journal to Siskiyou Co., and added:

"This is in the extreme northern portion of the State, near the Oregon line. When we have it dry here in the South they get some droppings from the Web Foot State; and there is a good prospect of a honey crop there, so I am going to look into the matter."

We will be glad to hear from Mr. Martin again, as to the outlook in his new field, after he gets there.



BEEDOM BOILED DOWN

Ventilating Cellars.—The editor of Canadian Bee Journal proposes to supply air to bee-cellars by a clock-work arrangement that regularly pumps fresh air into the cellar and forces out an equal amount. When the weather is cold, the air is to be forced through a compartment having a stove, and when the air is too warm it is to be forced through a shaft containing ice. But the question may be raised whether any pumping is needed except at such times as those when the temperature outside is just about the same as that in the cellar.

Do Bees Empty Brood-Combs into Super?—Ten strong colonies had their brood-chamber well filled with brood and stores, the latter being mostly buckwheat. When clover bloomed extracting-supers were put on over excluders. Seven of the ten showed plainly buckwheat honey in the supers, which goes to show that if there's any objectionable honey in the brood-chamber, it should be separately extracted as soon as the bees stop carrying it up, and if sections are to be filled an extracting-super must first be used till danger is past.—Ontario Experimental Apiary Report.

Spacing-Nails in Brood-Frames are supposed to be objectionable when the frames are to be put in the extractor, but actual trial proves that some at least do not find them so. O. O. Poppleton (Gleanings, p. 296) quotes Dr. Miller and E. R. Root to that effect, and says he has himself used spacing-nails for 25 years, finding no trouble with the old style of extractor, but with the reversible extractor the narrow baskets give less room for handling the combs, and the nails trouble by catching. Editor Root replies that the staples they use for spacing come just outside the wire-cloth, the comb-pockets being made shorter than a Langstroth frame.

Prof. Cook on Sweet Clover.—A. I. Root, in Gleanings, quotes Prof. Cook as saying, "I think the plant is worthless except for bees." Mr. Root cannot believe Prof. Cook meant to say just that, in view of the amount of testimony that has been given for years in bee and agricultural journals to the effect that in some localities farm stock eat it with avidity, and in view of its unquestioned value in rendering fertile the unproductive alkali lands of Arizona and Utah, and also in view of the immense traffic in sweet clover seed among those who have nothing to do with bees. He expects Prof. Cook to modify his statement, or say what he means.

Instructions for Handling Comb Honey.—A bright suggestion comes from G. A. Deadman, in Canadian Bee Journal. In every crate of honey to be shipt put a slip 5x8 inches (the editor says 3x4) printed as follows:

COMB HONEY.

HOW TO HANDLE IT.

You must not drop it. Hold it only by the wood, and when removing it from the crate, or at any other time, do not break the delicate cappings covering the cells, otherwise the honey will run out.

WHERE TO KEEP IT.

In a warm, dry room. No place too warm in which a person can live. Never put it in the cellar, as honey will draw dampness, and cause the cappings to break and the honey to leak.

Bee-Space Above Sections.—Editor Holtermann has no sympathy with the idea that a section not fully filled out all around is a desirable thing, and insists that a bee-space above sections helps to get them better filled. J. E. Crane having exprest an opposite view in Review, Mr. Holtermann proposes a test. Crane to select 50 colonies and have no bee-space above sections; Holtermann to select 50 to be run with the bee-space. At the close of season each to have photo taken of best side of 200 sections, then if decision can't be made from photos, Crane to cross the line or settle it in some way, the loser to pay all expenses. Some will think that a more satisfactory test could be made by having all in the same apiary and at the same time on the same harvest; and some might think better to make the test without anything that smacks of betting or gambling.

GENERAL ITEMS

Bees Doing Well.

I have 110 colonies of bees. They wintered well, and are doing well now. I have been in the bee-business for about 30 years here. WILLIAM FLEMING.

St. Croix Co., Wis., May 2.

Lost None in Wintering.

I now have 57 colonies in good condition. I lost none during the winter. The poplars are in bloom, and bees are doing well. The outlook is good. The first pollen was brought in Feb. 14, a little earlier than usual. J. G. TETER.

McMinn Co., Minn., May 5.

Prospects Good.

Mr. Charles Koeppen, for whom I am now working, has about 325 colonies of bees, and he says the prospects are good for 10 tons of comb honey. How is that for Michigan? Mr. Koeppen produced about six tons last year with only clover, basswood being a failure.

E. B. TYRRELL.

Genesee Co., Mich., May 7.

Wintered Well.

My bees wintered well, not losing a colony. I have a way of preparing my bees for winter that is different from any I have heard of. I have thought of writing it up. B. O. WILLIAMS.

Hardin Co., Iowa, May 2.

[We shall be glad to publish your wintering plan, Mr. Williams.—EDITOR.]

War May Interfere.

I am afraid my report of a honey crop for 1898 will be poor, as my bees will be without any attention if the Indiana National Guard is ordered to Cuba. My bees are in good condition; but I am willing to sacrifice almost everything to preserve the honors of our grand country. J. C. WALLENMEYER.

Vanderburgh Co., Ind., May 3.

Some Strange Experiences.

I have helpt to take care of bees ever since I was old enough to do anything, and that is about 25 years, so in that length of time, and steady work with the bees, I ought to know something about them; yet there are times when I feel that I do not know much about them after all.

On July 1, 1897, I had a large swarm issue, and it settled on a cedar limb all right. I then placed an empty hive on a table close up to them, and shook them off on the table. They began to crawl into the hive, and when nearly all in they began to rush out. I went and lookt at them, and on the table was a bunch of bees about the size of a base-ball. I began to pull the cluster apart, and found a nice-looking queen. Just as I took her in my fingers one of the worker-bees stung her, and she died in my hand in a few minutes. I then pulled her to pieces to find out if she was

BEE-BOOKS

SENT POSTPAID BY

George W. York & Co.,

Chicago, Ills.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, $1.00.

Langstroth on the Honey-Bee, revised by Dadant—This classic in bee-culture, has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages; bound in cloth.

Price, postpaid, $1.25.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof A. J Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages; bound in cloth and fully illustrated.

Price, postpaid, $1.25.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of Queen-Bees are reared in perfect accord with Nature's way. 176 pages, bound in cloth, and illustrated. Price, $1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopædia of 400 pages, describing everything pertaining to the care of the honey-bees. It contains 300 engravings. It was written especially for beginners Bound in cloth. Price, $1.25.

Advanced Bee-Culture, Its Methods and Management, by W Z. Hutchinson.—The author of this work is too well known to need further description of his book. He is a practical and entertaining writer. You should read his book. 90 pages, bound in paper, and illustrated Price, 50 cts.

Rational Bee-Keeping, by Dr. John Dzierzon—This is a translation of his latest German book on bee-culture. It has 350 pages: bound in paper covers, $1.00

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called BEES OF HONEY. 10_ page pamphlet. Price, 40 cents.

Convention Hand-Book, for Bee-Keepers. Thomas G. Newman.—It contains the parliamentary law and rules of order for Bee-Conventions—also Constitution and By-Laws, with subjects for discussion, etc. Cloth, gold-lettered Price, 25 cts.

Practical Hints to Bee-Keepers — by CHAS. F. MUTH. Also contains a Foul Brood Cure and How to Winter Bees. 40 p.; 10 cts.

Why Eat Honey?—This Leaflet is intended for FREE distribution, to create a Local Market. 100 copies, by mail, 30 cts.: 500 for $1.25; 1000, $2.00.

How to Keep Honey and preserve its richness and flavor. Price same as Why Eat Honey.

Alsike Clover Leaflet.—Full directions for growing. 50 for 25 cts.; 100 for 40 cts.; 200, 70c.

Apiary Register, by Thos. G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00; for 100 colonies, $1.25.

Preparation of Honey for the Market, including the production and care of comb and extracted honey. A chapter from BEES AND HONEY. Price, 10 cents

Bee-Pasturage a Necessity.—This book suggests what and how to plan It is a chapter from BEES AND HONEY. Price, 10 cents.

The Hive I Use, by G. M. Doolittle. It details his management of bees, and methods of producing comb honey. Price, 5 cents.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cts.

Silo and Silage, by Prof. A. J. Cook.—It gives the method in operation at the Michigan Agricultural College. Price, 25 cts.

Winter Problem in Bee-Keeping, by G. R. Pierce. Result of 25 years' experience. 30 cts.

History of Bee-Associations, and Brief Report of the first 20 conventions. Price, 10 cts

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. Price, 10 cts

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price 10 cts.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 p.; illustrated. 25c.

Commercial Calculator, by C. Ropp.—A ready Calculator, Business Arithmetic and Account-Book combined in one. Every farmer and business man should have it. No. 1, bound in water proof leatherette, calf finish. Price, 40 cts. No. 2 in fine artificial leather, with pocket, silicate slate, and account-book. Price, 60 cts.

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Maple Sugar and the Sugar Bush, by Prof. A. J. Cook.—Full instructions. Price, 35 cts.

Grain Tables, for casting up the price of grain, produce, hay, etc. Price, 25 cts.

Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others.—Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 30 cts.

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Poultry for Market and Poultry for Profit, by Fanny Field.—Tells everything about the Poultry Business. 64 pages. Price, 25 cts.

Turkeys for Market and Turkeys for Profit, by Fanny Field.—All about Turkey-Raising. 64 pages. Price, 25 cts.

Rural Life.—Bees. Poultry. Fruits, Vegetables, and Household Matters. 100 pages. 25 cts.

Potato Culture, by T. B. Terry.—It tells how to grow them profitably. Price, 40 cts.

Hand-Book of Health, by Dr. Foote.—Hints about eating, drinking, etc. Price, 25 cts.

Book Clubbing Offers.

(Read Carefully.)

The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only ONE book can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted see postpaid prices given with the description of the books on this page. Following is the clubbing-list:

1.	Langstroth on the Honey-Bee........	$2.00
2.	A B C of Bee-Culture..................	2.00
3.	Bee-Keeper's Guide.....................	1.75
4.	Bees and Honey [Cloth bound].......	1.65
5.	Doolittle's Scientific Queen-Rearing.	1.75
6.	Dr. Howard's Foul Brood Book.......	1.10
7.	Advanced Bee-Culture.................	1.30
9.	Bienen-Kultur [German].............	1.20
11.	Rational Bee-Keeping [Paper bound]	1.75
13.	Bee-Keeping for Profit................	1.15
14.	Convention Hand-Book.	1.15
15.	Poultry for Market and Profit.........	1.10
16.	Turkeys for Market and Profit........	1.10
17.	Capons and Caponizing.....	1.10
18.	Our Poultry Doctor	1.10
19.	Green's Four Books....................	1.15
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23.	Rural Life..................................	1.10
25.	Commercial Calculator, No. 1.........	1.25
26.	Commercial Calculator, No. 2..	1.40
27.	Kendall's Horse-Book	1.10
30.	Potato Culture..	1.20
32.	Hand-Book of Health	1.10
34.	Maple Sugar and the Sugar Bush....	1.20
35.	Silo and Silage..	1.10
36.	Winter Problem in Bee-Keeping.....	1.30
37.	Apiary Register (for 50 colonies).....	1.75
38.	Apiary Register (for 100 colonies) .	2.00

A QUESTION.—Could you not send one or more NEW SUBSCRIBERS with your own renewal? You doubtless have neighbor bee-keepers that would be glad to take the Bee Journal if you would ask them, and send in their subscription money. You will find premiums offered by us from week to week for such work. We would like to have you help us roll up a large list of readers for the old American Bee Journal.

a laying queen, and as near as I could tell she was not.

I then went to the old hive to get a frame of brood, or one with a queen-cell on, to put into the new hive. I moved the old one away, put the new one in its place, and let them come back, but when I took the frames out of the old hive, there was not a particle of eggs, larvæ, brood or queen-cells to be found; in all my experience I never had anything like it.

Last summer I had 10 colonies; nearly all the honey they stored soured in the combs in a short time after it was put there. They were all strong colonies and filled the boxes several times, and every time it would be sour and foam in the combs. Sometimes they would cap some of it over and it would burst the caps and run down through the hive. When the combs were full of this stuff I would throw it out with the extractor, and make vinegar of it. Now, why was this? Can any one tell? If so, I would be much obliged.

In the last 10 years I have averaged about 10,000 pounds a year of extracted honey from 100 colonies, spring count, and it has sold for about $70 a thousand pounds, making about $700 a year.

F. B. FARRINGTON.

Clayton Co., Iowa.

Keeping Ants Out of Hives.

In a recent issue of the Bee Journal I notice complaints of ants in bee-hives. In this warm climate we have more ants and vermin to the square acre than in any place in the United States. Try this: Drive four stakes of old gas-pipe (wood will do) into the ground the height you wish the hives to stand. Put the bottom-boards on them, clean out all grass or weeds, and take some candle-wicking and saturate with coal-oil and bind around each post so that the ants cannot ascend without crawling over it; and I guarantee none will get into the hive. When the wick gets too dry saturate again.

J. H. HERMANCE.

Garland Co., Ark.

Backward Spring.

I put into winter quarters 104 colonies, and took out 104—all alive. This was March 25, and they had a good flight March 26. In the afternoon it rained, and on Sunday morning four or five inches of snow fell. I took sick, and for six weeks the bees had to take care of themselves. When I was so I could look after them I found five of them all cleaned out. I think this has been the poorest spring I ever saw—we have a fine day, then three or four rainy and cold. Yesterday was a fine day, and pollen seemed to be very plentiful, by the way they brought it in.

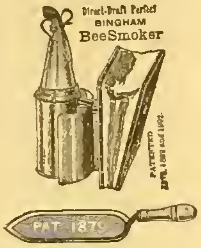
JOHN TURNBULL.

Houston Co., Minn., April 20.

Do Bees Move Eggs?

My experience teaches me that bees do move eggs, providing they need them badly enough to be moved, and if they are not put where they want them. Let us say a colony lost its queen, and has neither eggs nor honey to rear a queen from. Will not such a colony do almost anything in their bereavement, to restore them to their former condition? Most assuredly they will.

Suppose, now, we take two frames of



Bingham & Hetherington Uncapping-Knife.

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Smoke Engine (largest smoker made)	4-in. stove.	Doz. $13.00;	each, by mail,	$1.50
Doctor	3½ in. stove.	Doz. 9.00;	"	1.10
Conqueror	3-in. stove.	Doz. 6.50;	"	1.00
Large	2½-in. stove.	Doz. 5.00;	"	.90
Plain	2-in. stove.	Doz. 4.75;	"	.70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz. 4.50;	"	.60
Honey-Knife		Doz. 6.00;	"	.80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

Mr. Bingham, Dear Sir:—Please send per mail a 4-inch Smoke Engine. I have one of your Smokers; it is too small in time of trouble.

February 21, 1898. A. F. SEWARD, Riverside, Calif.

9A9t **T. F. BINGHAM, Farwell, Michigan.**

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Crimson Clover.......	.55	.90	2.00	3.50

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with dovetailed body and supers, and a full line of other Supplies, and we are selling them CHEAP. A postal sent for a price-list may save you $ $ $ $

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PATENT WIRED COMB FOUNDATION

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Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y.
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BEE-KEEPERS! Let me send you my 64-page Catalog for 1898
J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing

eggs from some of the other hives and exchange them with the outer frames of the queenless colony, if there are bees enough in the hive to give sufficient heat to hatch them where they are, they may, or may not, move them. But should they not have that sufficient heat, they will move them to where they want them, and the likeliest place will be, or is, in the center of the hive where they can give them the required heat to hatch them in due time. F. HENTRICK.
Sac Co., Iowa.

◆

Bees Dying from Spraying.

My bees are dying by the hundreds. This is uncommon for this time of the year. My neighbors are spraying their fruit-trees, and poison my bees. I told them to wait till after the blossoms had fallen, but they won't I went to town yesterday to see a lawyer about it, and he said there could be nothing done about it. He said they had a right to spray their fruit-trees. There should be a law to protect bee-keepers in their rights. My neighbors' bees are all dying, too. I am the only bee-keeper in the neighborhood who takes a bee-paper.

I have 9 colonies at present, swarming out on the ground and kicking their heels up. Some are dying and some are dead. I hope by the next time I write my bees will be all right. It is discouraging at present. W. M. DANIELS.
Wood Co., Ohio, May 7.

◆

Mating—Laying Worker—Ventilation

It is generally believed by bee-men that queen-bees mate up in the air and come down to the ground while mating. It is not always the case. Two years ago this May my nephew, E. D. Shryock, saw a black queen and black drone mate on a bunch of black locust bloom; after mating both flew away.

The way I manage laying workers is this: Put a colony with a queen with them, and let them fight it out.

There is much talk about ventilation. A bee-keeper in this neighborhood used to have some 20 colonies of bees in box-hives, flat on benches. During the winter he plastered all around the bottoms of the hives with mortar so the bees could not come out. Why did they not smother? J. L. CRUTCHER.
Franklin Co., Ky.

◆

Fine Spring and Good Prospects.

We are having a very fine spring. Prospects are good for a good honey season. Bees are in fine condition. The past was a mild winter—bees were out almost every week.

I sent a carload of honey to Belgium, and would send more but I cannot get the quality. We could have sold five cars more if we could have gotten the honey, and now as the war is on we will have to wait awhile before we can ship again.

My bees in the Puyallup Valley are in fine condition. I have two apiaries, one in Puyallup and one in Sumner. I shall have to put supers on the hives in the valley soon, if they keep on as they are going now. Drones are flying, and they are getting ready for the clover flow, which may start about May 25 this year, if the weather continues as it has been; but it may turn off and rain

$100

Given as Bounties to purchasers of the improved Danz. Hives and Sections See schedule in my bee-book "Facts About Bees." Tells how to produce honey that sells for the most money. Free for 2c in stamps. Address
THE A. I. ROOT CO., Medina, Ohio,
or F. DANZENBAKER, Box 466, Washington, D. C.
Please mention Bee Journal when writing.

Excelsior Incubator
and Brooder Cheap.....

200 eggs capacity. Good as new. Used for only two hatches. Everything complete. Will sell it for
TWENTY DOLLARS, half the cost price
Address. **P. W. DUNNE,**
River Forest, Cook Co., Ill.

Texas Queens

Best honey-gathering strain in America. Tested, $1.50. Untested, $1.00. Write for a Circular. **J. D. GIVENS, Lisbon, Tex.**
7A26t Please mention the Bee Journal.

BEE-KEEPERS' SUPPLIES!
Largest and Best equipt
Factory in the
SOUTH-WEST.
Send for Catalog.
FRED A. DALTON,
1A26t WALKER, Vernon Co., MO.
Please mention Bee Journal when writing.

Queens, Bees and Bee-Keepers' Supplies

Tested Queens in April and May, $1.00. Untested, 75c. Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

F. A. CROWELL,
8Atf GRANGER, MINN.
Please mention Bee Journal when writing.

Bees for Sale
in Indiana!

Italian Bees in 8-frame Langstroth hives. Per colony $5.00; 5 or more at one time $4.50 per colony. I have only a limited number for sale. They are strong colonies, and ready for business. Address, **W. H. WATTS,**
19Atf **Ross, Lake Co., Ind.**

"WATCH POUDER'S AD"

SEE THAT WINK!

Bee-Supplies! ROOT'S GOODS at Root's Prices.

Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Catalog free. Walter S. Pouder,
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INDIANAPOLIS, INDIANA.
Please mention Bee Journal when writing.

QUEENS Italian stock. Untested, 70c each; 3 for $2.00 After July 1, 50 cents each; tested, $1.00 each. **Root's Goods at Root's Prices.** Prompt shipment and satisfaction guaranteed. Catalog free.
THEODORE BENDER,
20Atf **Canton, Ohio.**
Please mention Bee Journal when writing.

Make Your Will **DO IT NOW** and do it **Yourself. Thousands** would do so only they dislike the publicity and do not know where to obtain blank forms. For $1.00, I will mail you under unmarkt cover blank form on fine paper with directions how to **make a plain, legal straightforward Will** without expense or assistance. Send postal order or $1.00 bill.
20A1t **J. F. POWELL, Waukegan, Ill.**
Please mention Bee Journal when writing.

steady for three or four weeks, and we might "get left" on our fine prospects for a good flow. G. D. LITTOOY.

Pierce Co., Wash., April 28.

A Spring Report.

My bees wintered pretty well. Out of 24 colonies I lost 4, leaving 20 in good condition to build up for the white clover, which is my main crop of honey. I have a few colonies that have two hive-bodies of 8-frames each, which are nearly full of brood and running over with bees. From these I expect a large crop of honey. I have all my queens clipt, as I can manage them better and keep them on my own lot in the city. They do not bother any of the neighbors, only to gather nectar from their fruit-trees. My other apiary, which is located about eight miles from here, is in good condition for the coming harvest, and you will hear from me later.

W. H. HEIM.

Lycoming Co., Pa., May 9.

Onion a Bee-Sting Cure.

I find that when I get stung by the bees an excellent cure is to cut a common onion in halves, take part of it and rub the skin. It will not swell nor itch. If some one laughs at this let him laugh, I don't care. I am like Mrs. Brown and her wet dish-cloth.

We had very cold weather in April, many things frozen.

I like the Bee Journal and could not do without having it paid in advance, for it makes me happy, and I feel like giving three cheers. If not paid in advance I could not do it. I wonder if the editor will cheer with us. E. B. KAUFFMAN.

Lancaster Co., Pa., April 18.

[Yes, lots of paid-in-advance subscribers ought to make a *cheerful* editor. We'd be willing to guarantee to be full of cheers if all our subscribers resolve to be like Mr. Kauffman in regard to their subscriptions to the American Bee Journal.—EDITOR.]

If you want the BEST... **Honey Extractor**

Get Williams' Automatic Reversible, And You Have It. Address,

VAN ALLEN & WILLIAMS,

10Etf **Barnum, Wisconsin.**

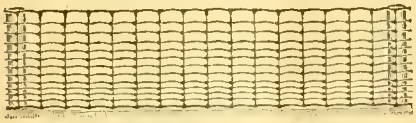
Please mention Bee Journal when writing.

Golden Italian Queens Cheap!

If you want **BEES FOR BUSINESS,** send for my Catalog of prices. . . . .

18Etf J. F. MICHAEL, Greenville, Ohio.

Please mention Bee Journal when writing.



The Dogs of War

let loose will increase the need to farm carefully to "make ends meet." Good fences save temper, time, stock and crops. See our ad. in next issue.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Please mention Bee Journal when writing.

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

Page & Lyon Mfg. Co. New London, Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

Please mention the American Bee Journal. 7Atf

Italian Bees For Sale!!

We have arranged with a large bee-keeper in Lee County, Ill., (about 100 miles west of Chicago), to fill our orders for Italian Bees at the following prices there, which include a good Queen with each colony:

8 L. frames of bees in light shipping-case, $3.75
5 at $3.50 each.

8 L. frames of bees in dovetailed hive, $4.25.
5 at $4.00 each.

Prompt shipment after May 1, and safe arrival and satisfaction guaranteed. Address

GEORGE W. YORK & CO.,
· CHICAGO, ILLS.

Please mention Bee Journal when writing.

The Largest and Most Complete Stock

Of Bee-Keepers' Supplies in the Northwest. The very latest up-to-date and best Hives made, Danzenbaker Hives, Hives for Slotted Sections, and a very low-priced Hive, and carloads of other goods, all in our warehouse ready to ship.

THE A. I. ROOT COMPANY,
H. G. ACKLIN, Manager.
17A5t 1024 Mississippi Street, St. Paul, Minn.

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Cash PAID FOR Beeswax

For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 27 cents per pound, CASH. No commission. Now if you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

GEO. W. YORK & CO.
118 Michigan st., CHICAGO, ILL.

WHAT DO YOU WANT?

If it's **Buggies, Harness, Saddles, Bicycles, Sewing Machines, Feed Cookers, Cider Presses, Spray Pumps, Poultry Supplies** or anything else, we can supply it direct from the factory. No matter what it is, or where it is made, we can supply it ***and save you money too.*** Try us. Write for our illustrated catalogue, circulars, etc.

MAKE YOUR WANTS KNOWN

Frank B. Barkley Mfg. Co. 885 Old Colony, Chicago, Illinois.

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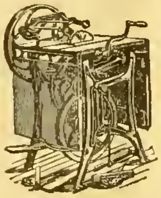
COMB FOUNDATION Wholesale and Retail.

Working Wax into Foundation for CASH **A Specialty.**

Hives, Sections, and a full line of Supplies. The **best** of everything. Write for Catalog, with prices, and samples of Foundation and Sections.

BEESWAX always wanted for cash or trade.

GUS DITTMER,
AUGUSTA, WIS.



ONE MAN WITH THE **UNION** COMBINATION SAW

Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing, Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery Sold on Trial. Catalogue Free.

SENECA FALLS MFG. CO.,
46 Water St SENECA FALLS, N. Y

Please mention Bee Journal when writing.

—ITALIAN—

Bees and Queens

Queens $1.00; Bees by the pound $1.00; Nuclei, two frames with Queen, $2.00; one-frame $1.50. Also **Barred and White P. Rocks and Silver-Laced Wyandottes.** Eggs for Sitting at $1.00 per 15.

17A8t Mrs. A. A. Simpson, Swarts, Pa.

Please mention Bee Journal when writing.

Listen! Take my Advice and Buy
⁂ Your Bee-Supplies ⁂
of August Weiss!

FINE FOUNDATION AND TONS OF IT. **Working Wax into Foundation a Specialty.**

I DEFY competition in Foundation

Millions of Sections—Polisht on both Sides!!

SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalogue and be your own judge. Wax wanted at 26 cents cash, or 28 cents in trade, delivered to me.

AUGUST WEISS, Hortonville, Wisconsin.

DR. PEIRO,

CENTRAL MUSIC HALL, CHICAGO.

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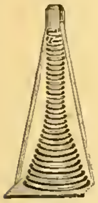
GOLDEN BEAUTIES...

Three-band Italian Queens reared from Root's stock. Golden Queens, from the best selected stock, Untested, 50 cents; Tested, 75 cents. Carniolan Queens at same price.

E. Y. TERRAL & CO.,
Cameron, Texas.

12Atf Mention the American Bee Journal.



Queen-Clipping Device Free

The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 30 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

GEORGE W. YORK & CO.,
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If you are interested in sheep in any way you cannot afford to be without the best and only weekly sheep paper published in the United States.

WOOL MARKETS AND SHEEP ☙ ☙ ☙

has a hobby which is the sheep breeder and his industry, first foremost and all the time. Are you interested? Write to-day

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BEES, HONEY, MONEY

Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

J. P. H. BROWN, Augusta, Ga.

EGGS From pure bred, barred P. Rocks Large and fine plumaged. $1.00 per 15. Also Light Brahmas and Black Langshans, same price. B. P. Rock Cockerels, $1.25.

MRS. L. C. AXTELL,
ROSEVILLE, ILL.

Please mention Bee Journal when writing.

BEES! Florida Italian QUEENS!

Tested Queens, $1.00 each; Untested, 50c. Prompt and satisfactory dealing.

Address, **E. L. CARRINGTON,**
11Atf De Funiak Springs, Fla.

Please mention Bee Journal when writing.

Bee-Hives, Sections, Shipping-Cases—everything used by bee-keepers. Orders filled promptly. Send for catalog. MINNESOTA BEE-KEEPERS' SUPPLY MFG. CO., Nicollet Island, Minneapolis, Minn.

Please mention Bee Journal when writing.

Van Deusen Thin Foundation...

We have several 25-pound boxes of Van Deusen Thin Flat-Bottom Comb Foundation for sale, at $12.50 per box. This Foundation is preferred by many. As we have only a few boxes of it, an order for same should be sent promptly. Address **The A. I. Root Co.** 118 Michigan Street, Chicago, Ill.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, May 2.—Fancy white comb honey would bring 11 cents, but there is none here; other good grades of white at 9 to 10c.; dark and amber, 7 to 8c. Extracted, white, 5 to 6c.; ambers, 4½ to 5c.; dark and off grades, 4c., with exception of dark candied and amber grades. This market is bare of comb, and while prices have been low the quantity sold locally has been greater than last season. Beeswax scarce, and sells at 27c. for average lots. R. A. BURNETT & CO.

Kansas City, May 10.—The crop of 1897 comb honey in this market is about all sold, and we are ready for the new crop. The supply of extracted is fair—the demand light. Shipments of new comb honey would bring a fair price, probably 12c.
C. C. CLEMONS & CO.

Cincinnati, May 12.—Demand is slow for all kinds of honey, especially comb. Prices for best white comb honey, 10 to 13 cents. Extracted honey brings 3½ to 6c. according to quality. Beeswax in good demand at 25 to 28c for good to choice yellow.
CHAS. F. MUTH & SON.

Boston, May 2.—Fancy No. 1, in cartons, 13c.; in glass-front cases, 12c.; A No. 1, 11c.; No. 1, 9 to 10c.; No. 2, no sale. Extracted, white, 6@7c.; light amber, 5@6c. Beeswax is in very light supply, and if pure would readily bring 27c.

There is nothing new to note in our market for honey. As usual at this time of year, the demand has dropt to almost nothing, but as the supply is light, prices are well maintained and firm. BLAKE, SCOTT & LEE.

Cleveland, May 2.—Fancy white, 12 to 12½c.; No. 1, 11c.; No. 1 amber, 9 to 10c.; buckwheat, 8c. Extracted, white, 6c.; amber, 4 to 5c. A. B. WILLIAMS & CO.

San Francisco, May 2.—White comb, 8½ to 10c; amber, 6½ to 7½c. Extracted, white, 5½@6c.; light amber, 4¾ to 5¼c. Beeswax, 24@26c

Market shows a healthy tone, especially for extracted, with very little of this class now remaining. Comb continues obtainable at former rates, with a fair business doing on local account. There will be little honey the coming season, and it is probable that values will further harden.

Detroit, May 10.—Fancy white honey is lower and now quoted at 11c. No. 1, 9@10c; fancy dark, 7@8c; No. 1 dark, 6@7c. Extracted, white, 5@6c; dark, 4@5c. Beeswax 27@28c.

There are no changes in quotations, and very little desirable honey left. Sales are so slow that it is difficult to quote. The poor lots are being pusht at what they will bring.
M. H. HUNT.

Minneapolis, May 2.—Honey much more encouraging. Fancy white clover comb is selling here now at 10½@11½c. Not advisable to ship darker than amber. Extracted fancy white clover, 5½@6c; amber, 5c; dark, 4@4½c.

Outlook for honey much more encouraging.
S. H. HALL & CO.

Indianapolis, May 2.—Fancy white 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand. WALTER S. POUDER.

Milwaukee, May 5.—Fancy 1-pound sections, 11@12c; A No. 1, 10@11 cents; No. 1 8@10c; amber, 8@8½c; dark, 7@7½c. White extracted in barrels and kegs, 5½@6c; amber, 5@5½c. Beeswax, 26@28c.

The demand for honey continues very good indeed, and values fairly sustained. While the best grades are most salable, the inferior grades meet attention, and the movements are quite satisfactory. A. V. BISHOP & CO.

Buffalo, May 2.—There is a very good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

St. Louis, Feb. 9.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.
WESTCOTT COM. CO.

Convention Notices.

Central California.—The next annual meeting of the Central California Bee-Keepers' Association will be held at Hanford, Cal., Wednesday, June 1, 1898, at 10 o'clock a.m. Election of officers and other important business to be attended to.
W. A. H. GILSTRAP, Sec.
Caruthers, Calif.

Fresno Co., Calif.—The next quarterly meeting of the Fresno County Bee-Keepers' Association will be held at the City Hall, in Fresno, Calif., Wednesday, June 8, at 1 o'clock p. m. Constitution and By-Laws are to be adopted. Marketing honey and other business is to come up for consideration.
W. A. H. GILSTRAP, Sec.
Caruthers, Calif.

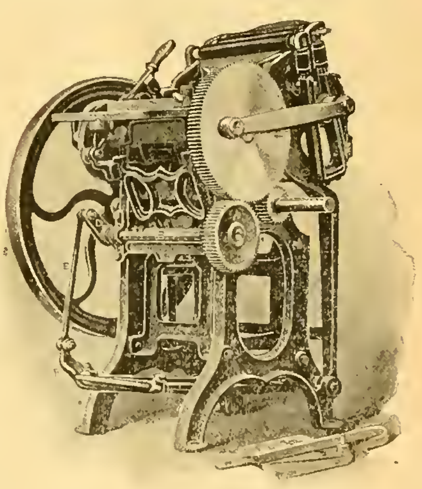
PRINTED

Envelopes and Letter-Heads.

We have put in a new small Job Printing Press on which to print our own stationery, circulars, etc., and while being able to do this we may as well do some work for our readers, if they will favor us with their orders. If you want Envelopes or Letter-Heads, send 2-cent stamp for samples and prices. We will make right prices for neat, good work. All orders can be filled by express, at small charge, as the weight would not be great.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

Please mention Bee Journal when writing.



Basswood Honey FOR SALE

We have a limited number of barrels of **very best Basswood** Extracted Honey, weighing NET about 280 lbs. which we are offering at 6 cents per lb. f. o. b. Chicago. Do you want a barrel or so of it? If so, address, with the cash,

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

READY TO MAIL

My 40-page Catalog of my Specialties, and **Root's Goods at their prices.** I carry a full line of BEE-KEEPERS' SUPPLIES, and can ship promptly. Catalog Free.

GEO. E. HILTON, Fremont, Mich.

Please mention Bee Journal when writing.

Catalog Free **A. I. Root & Co's Goods** for Missouri and other points, to be had at factory prices from **John Nebel & Son, High Hill, Missouri.** 9Atf

Please mention Bee Journal when writing.

Talk about ....Comb Foundation

WE can now furnish the very best that can be made from pure wax. **Our New Process of Milling** enables us to surpass the previous efforts of ourselves and others in the manufacture of Comb Foundation.

It is always Pure and Sweet.
It is the kind that does not sag.
It is the kind you want.

If you once try it you will have no other. Samples furnisht **FREE.** Large illustrated Catalog of all kinds of

Bee-Keepers' Supplies,

And a copy of the American Bee-Keeper, sent upon application. Address,

THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

NEW YORK, is the city,
105 Park Place, is the street,
I. J. STRINGHAM, is the man

Who is prepared to ship you, on short notice, **anything** in the apiarian line.

Are YOU the man who wants to buy ?

Send for Catalog, anyway.

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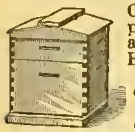
CARLOADS—



Of Bee-Hives, Sections, Shipping-Cases, Comb Foundation, and **Everything** used in the Bee-Industry.

We want the name and address of every Bee-Keeper in **America.** We supply Dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment.

Write for Catalogs, Quotations, etc.

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Please mention Bee Journal when writing.

The A. I. Root Co.'s Goods **Wholesale. Retail.**

Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**
Cash for Beeswax. BELL BRANCH, MICH.

Please mention Bee Journal when writing.

I ARISE

TO SAY to the readers of the BEE JOURNAL that **DOOLITTLE** has concluded to sell —BEES and QUEENS— in their season, during 1898, at the following prices :

One Colony of Italians on 9 Gallup frames, in light shipping-box	$6 00
Five Colonies.....	25 00
Ten Colonies......	45 00
1 untested queen.	1 00
6 " queens	5 50
12 " "	10 00
1 tested Queen...	$1 50
3 " Queens.	3 50
1 select tested queen	2 00
3 " " Queens	4 00
Select tested queen, previous season's rearing..	3 00
Extra Selected for breeding, THE VERY BEST..	5 00

About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

—0—

Circular free, giving full particulars regarding the Bees and each class of Queens.

Address

G. M. DOOLITTLE,
1A25t BORODINO, Onon. Co., N. Y.

21st Year Dadant's Foundation. 21st Year

Why does it sell so Well?

Because it has always given better satisfaction than any other.
Because **IN 21 YEARS** there have not been any complaints, but thousands of compliments.

We Guarantee Satisfaction.

What more can anybody do? **Beauty, Purity, Firmness, No Sagging, No Loss.**
PATENT WEED PROCESS SHEETING.

Send Name for our Catalog, Samples of Foundation and Veil Material. We sell the best VEILS, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

LANGSTROTH ON THE HONEY-BEE, Revised.
The Classic in Bee-Culture—Price, $1.25, by mail.

Foundation and Beeswax Prices Advanced.—We quote an advance of three cents in Foundation, wholesale and retail, on the prices quoted in our Circular. BEESWAX WANTED, at advanced prices also.

CHAS. DADANT & SON,
Please mention the Am. Bee Journal. **HAMILTON, Hancock Co., ILL.**

OUR MOTTO—"Well Manufactured Stock! Quick Shipments!"

SECTIONS, SHIPPING-CASES, —AND— BEE-KEEPERS' SUPPLIES.

We make a specialty of making the very best Sections on the market. The **BASSWOOD** in this part of Wisconsin is acknowledged by all to be the best for making **the One-Piece Honey-Sections**—selected, young, and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

MARSHFIELD MFG. CO., Marshfield, Wis.

Please mention the American Bee Journal when writing.

ROOT'S GOODS.

Our Specialties:
- The Fence and Plain Sections.
- Weed New Process Foundation.
- Cowan Extractors.
- Porter Bee-Escapes—the best made.
- Dovetailed Hives—with Danz. Patented Cover and Bottom.
- Danzenbaker Hives.
- No-Drip Shipping-Cases.
- Gleanings in Bee-Culture, Illustrated, Semi-Monthly.

Catalog of Goods and Sample Copy of Gleanings sent for your name on a postal.

THE A. I. ROOT CO.
MEDINA, OHIO.

Branch Offices:
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1024 Mississippi Street, St. Paul, Minn.
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10 Vine Street, Philadelphia, Pa.
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AMERICAN BEE JOURNAL.
ESTABLISHT IN 1861 - OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

Publisht Weekly at 118 Michigan St. GEORGE W. YORK, EDITOR. $1.00 a Year—Sample Copy Free.

38th Year. CHICAGO, ILL., MAY 26, 1898. No. 21.

CONTRIBUTED ARTICLES

Loaded Field-Bees in the Sections.

BY G. M. DOOLITTLE.

There is much being said of late about raising hives up from the bottom-board, and providing the large entrances to those not fully raised, as above, so that the field-bees, with their loads of nectar, may be obliged to pass up the sides of the hive to the surplus receptacles, thus compelling them to deposit their honey where it is wanted. And the claim is also put forth that by so doing the bees can more easily enter the sections, as they do not have to crowd their way up through the center, or most populous part of the hive, as they do when only the ordinary entrance is used. Of one thing all the advocates of this plan seem to be sure, which is, that unless the bees are thus forced to go from the fields to the sections with their loads of nectar, the same will of necessity be deposited by these bees in the comb-cells of the brood-chamber.

Mr. R. C. Aikin (and Family), President of the Colorado Bee-Keepers' Association. From Gleanings.

Now I wish to ask each of the gentlemen thus arguing, what reasons they have for believing that field-bees ever deposit their loads of nectar directly in the cells? Mr. Golden, I believe, claims that he knows that they do this, but if he has told us *why* or *how* he knows it, I have failed to see the place.

This craze that has come over the people for "high-up" entrances reminds me of a similar craze along about 30 years ago, when it was thought necessary to have from one to four entrances direct into the surplus apartment, beside the lower or main entrance; for, in this way, the bees were saved all the extra travel up through the crowded hive. And then, as they could fly direct to these upper entrances much time would be saved, as the bee could fly much faster than it could go on foot, even tho the lower part of the hive was empty. Thus a much larger yield of honey could be secured to the owner, for "time was honey" when the honey harvest was on.

Along about this time E. Gallup, I think it was, made the discovery and gave it to the world, that the bee which collected the nectar did not deposit it in the comb, but when it came into the hive with its load it gave that load to another bee—usually a bee so young as not to have become a field-laborer yet—the young bee holding the nectar in its honey-stomach till it was evaporated to the consistency of prime honey, when this young bee deposited it in the cells, wherever it was most needed, whether in the surplus apartment or in the brood-chamber. A few tried to argue Dr. Gallup down, but he had the proof on his side by telling how he saw the field-bees pass their loads of nectar over to the younger bees, how the nectar was evaporated, etc. This upset the direct-to-surplus-apartment-entrance plan, and to-day no such entrances are seen, except, perhaps, on some old hives which have been stored away for years.

Being of an investigating turn of mind, I wisht to prove which was right—Gallup or the others—so some 25 years ago I constructed observatory hives, beside which I have watcht for hours, both day and night, and every observation proved Gallup to be right. Then the "rightness" of his ideas was also proved many times over by a change of queens from black to Italian, and *vice versa*, when at the proper time, before any of the new queens' bees became field-laborers, all the workers from the original queen would be seen coming in with their loads of nectar, while the sections revealed scarcely a bee but those from the newly-establisht mother.

If Gallup and myself are right, this doctrine now being put forth is as fallacious as was the old multiplicity-of-entrance plan, and if fallacious, it would be well to know it, for such knowledge will save much work to our bee-keepers when the little each one does along this line is put into the aggregate. Onondaga Co., N. Y.

Ripening Extracted Honey Artificially.

BY E. B. TYRRELL.

I promist to write concerning the ripening of extracted honey. I must thank Mr. J. A. Bearden for his article on page 66, but he mistook my meaning, for I am in favor of artificial ripening of honey, providing it is practical. Altho I am not speaking from experience, yet for the sake of drawing out arguments and opinions of those who have had experience and getting at the truth of the matter as I wish to ripen artificially, if I can, and yet do not wish to make a mistake, I will take the artificial side of the question.

I will take the position that ripened honey is that which reaches a certain consistency, or thick enough so that a saucer of it when cold may be turned upside down without running out, *and it doesn't make any difference whether it reaches this consistency while in the hive* or *out of it.*

Admitting this to be a fact, I will venture the statement that honey can be brought to this consistency as well artificially as by the bees, because heat produces evaporation no matter in what way applied, and if honey is placed in a shallow pan with a large surface I can see no reason why it will not ripen as well as the bees can ripen it. Of course, no doubt the bees may ripen it faster, as the fresh nectar gathered each day must be reduced as much as possible during the night to make room for the next day's harvest.

Many, and in fact nearly all, writers admit that more honey may be secured if extracted as fast as gathered, and will not this extra honey pay for any extra labor implied by extracting during the flow? I believe that the reason that more honey is secured by extracting as fast as gathered must be because it draws from the field-force as well as from the honey to build the cappings, and as these cappings are of no use to the extracted-honey producer (except for beeswax), and in fact are a nuisance; for who would not rather extract honey from comb with no cappings, and especially this honey, than to be bothered with an uncapping-can and an uncapping-knife, making a slow, sticky job out of what would otherwise be fairly clean? I believe uncapping takes all the flower from extracting, and if I can do away with the uncapping can and knife I certainly shall do it.

Now, if you don't agree with me (and you certainly all don't) just jump right up and knock my *theories* all to pieces with *facts*; it certainly will take facts to convince me I am wrong, and if your facts are good I am willing to be convinced, but I believe that this talk about artificially ripened honey not being as good as naturally ripened honey is nearly all prejudice, and most of those who extract after the harvest have not tried the other way, or else *did not do their very best* in artificial ripening, and attend *to every detail.*

Now, I don't wish any one to go into artifical ripening of honey on account of what I have said, but I do wish to know the truth about this matter, as it means dollars to me; and any light on this subject through the Bee Journal will be gratefully read by me. Genesee Co., Mich.

Something More About Section-Cleaners.

BY J. A. GOLDEN.

Upon request I am glad to give my experience as to propolis sticking and gumming the sandpaper when in a soft condition, which explanation inadvertently was overlookt in my former article.

Yes, if a section contains much propolis upon its surface, like sections when oilcloth is used over them, or any section badly gummed up; but as I use, in my method, a bee-space only, I have but little chunk propolis. In taking sections from the supers I use an old jack-knife to take off any bulky surplus propolis as I lift the sections out, consequently what remains on the sections I do not find any inconvenience in cleaning every vestige of stain and propolis from the section. As I am not a large producer, I usually set what honey I want to dress in the cellar until it is cool—sometimes over night—and dress it in the morning.

My experience is that a pretty coarse sandpaper—about No. 3—would be better than a finer grade. Of course the polish is not so nice.

On the wheel device, which was illustrated in the American Bee Journal, I cleaned over 1,000 sections beautiful and bright as ever was put on the market by any bee-keeper, before re-coating the wheel with sandpaper.

To re-coat, take a sponge and saturate thoroughly with hot water, then strip the old paper off and apply a new coating.

There is a great difference as to how a section is held to avoid gumming. If it is held crosswise the grain of the wood there is but little danger of propolis sticking, but if held the opposite the paper does not cut the wood so readily. That is my observation, at least.

There is also another thing, let me here add. If leakage, honey daubed on the section or propolis, it is sure to stick on the sandpaper belt or wheel. Of course, no one would expect a machine to overcome this, but if wiped off the work will be complete; but after propolis becomes hard I did not find a single section that caused any gumming of the wheel.

Morgan Co., Ohio.

Do Italian Bees Produce Better Honey?

BY EDWIN BEVINS.

It is with considerable hesitation that I attempt to answer the question of Mr. Hart, on page 269, because he confines the privilege of answering to the wise ones in apiculture, and I am not one of these. Then an editorial foot-note suggests that the question affords a chance for some one to distinguish himself, and I am not writing for distinction. Nevertheless, I am going to say something in the way of reply to Mr. Hart's question, as to why the Italian bees produce a better quality of honey than the blacks or others.

I do not know just how extensive Mr. Hart's reading has been, but this is the first time that I have known any bee-keeper to intimate that the quality of the honey produced by Italian bees was any way superior to that produced by other bees. Many times it is claimed that there is a difference in the whiteness of the cappings of the honey, but this difference is in favor of the blacks and some others, and against the Italians. As to the honey itself, I have never seen an opinion that the quality of the honey produced by any one race of bees was superior to that produced by the other races where all had access to the same sources of supply.

Mr. Hart thinks the difference, if there is any, may be accounted for on the supposition that the Italians are better mechanics or chemists then other bees, *if* it is a fact that bees *make* honey. Now, I believe that Mr. Hart is satisfied in his own mind that bees do not "make" honey. He is giving undue deference to the opinions of some who do not know much about bees, and yet can do considerable talking about them. The ignorance which leaves one to believe that bees make honey may be excusable in the gentiles, but a child of Israel who has past through the Red Sea and the wilderness, and arrived at a land flowing with milk and *honey*, and still entertains the opinion that bees make honey ought to be ashamed of himself.

Then Mr. Hart comes at us with another *if*, which is entitled to no more consideration than the first one. *If* the Italians have longer tongues than other bees, it is an unquestionable fact that not many of them have tongues long enough to gather honey enough from red clover to cut any figure. Besides, who is able to say that the honey of red clover is any better than the honey of white clover? Has any one compared the honey from a bumble-bee's nest with the honey stored in sections in the midst of white clover bloom?

It looks a good deal as if Mr. Hart was "putting up a job" on bee-keepers, to get them to account for a difference which does not exist. I will therefore turn the work over to some one wiser and more covetous of distinction than I am.

Decatur Co., Iowa.

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Watering Bees—Feeding—Cleaning Hives.

BY MRS. L. HARRISON.

I think watering bees is important. They should be accustomed early in the season to find water in the apiary, and not be frequenting watering-troughs, cisterns and wells. On cool mornings the water should be warm. Up to date (May 9) we fill their drinking-vessels with warm water, and are paid for doing it in preserving the life of many a bee. Wash them out occasionally, and put in a pinch of salt.

FEEDING BEES.

We keep a regular feeding-ground, and no robbing has ever been induced thereby. All sticky papers, sections or cases are put there for the bees to clean up. Any bits, or odds and ends of comb, the accumulation of the winter, are put there for the bees. When robbers attack a queenless colony we let them alone, and when they get all the honey go home and take the bees along. If the hive and stores are taken from them they will then try to rob other hives, and trouble ensues. When they are through, the hive can be cleaned and be in readiness for a swarm.

CLEANING HIVES WHERE BEES DIED.

Where colonies have died during the winter the bees should not be allowed to remain and rot, but pry up the combs, brush off the dead bees, and scrub out the hive, pouring in boiling water from the spout of a kettle, and turn it up to dry. Cut off all old queen-cells, and remove the drone or very thick, undesirable comb. The bees that are in the cells can remain and will rattle out out when dry, or when given to the bees they will remove them, working cheaper than we can. This hive will then be a bonanza when a swarm issues.

ADULTERATION OF BEESWAX.

Those who sew carpets and manufacture overalls call frequently for beeswax, saying that what they buy at stores is not good—has grease in it. Are there complaints of this kind elsewhere?

Bees wintered well in this locality, and the spring has been favorable for the rearing of brood. They did well on peach and cherry bloom, which has just past; but there was very little bloom in this immediate neighborhood. Dandelions are very abundant, and fill the interim between fruit-bloom and clovers.

Peoria Co., Ill.

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National Bee-Keepers, Union—13th Annual Report—for 1897.

BY THOMAS G. NEWMAN.

The appeals for assistance are the largest for any year in the history of the Union, and cover all phases of trouble—briefly reviewed as follows:

PROHIBITING BEE-KEEPING.

As stated in our last Report, the City Council of Clarinda, Iowa, was petitioned to pass an ordinance prohibiting the keeping of bees within the corporate limits. The Union forwarded to the Mayor, City Attorney, and each member of the City Council, copies of the "Decision of the Supreme Court," on the point at issue.

After some delay it came before the District Court. The Union's attorney was supplied with abundant ammunition to show that bees do not injure fruit, and the Union was victorious. There were several apiaries there, and the rights of apiarists were maintained. The chief apiary there belonged to Mr. J. C. Strong, against whom the suit was brought.

WANTED THE APIARY REMOVED.

Thos. C. Stanley & Son had about 150 colonies of bees in Fairfield, Ills., where they owned 32 lots. A neighbor who owned a lot or two petitioned the City Council to order the bees removed as a nuisance. We wrote personal letters to the Mayor and each of the aldermen, and sent them copies of the Supreme Court decision, showing that bees are not *per se* a nuisance, and could not be legislated against in "omnibus." We informed them that should they pass such an ordinance as was prayed for, abridging the rights and privileges of bee-keepers, it would become the duty of the Union to test it in the Courts, as it abridged rights guaranteed by the Constitution of the United States. Our attorney attended the meeting of the Board, and argued the case as outlined by the General Manager. That ordinance then and there died a natural death. Mr. Stanley wrote thus: "We thank you for the assistance of the Union." Record another *victory* for the Union!

DR. BESSE'S SWEET CLOVER FIELD.

This case was mentioned in our last year's Report. The Township Trustees, against this protest, cut down his planted field of bee-pasturage (three acres of sweet clover), and then charged him $27.20 as fees for doing the damage. This deprived his bees of pasturage, and cut short his honey crop in consequence. He sued the township and appealed to the Union for assistance. The case has been postponed from time to time, and is yet untried. The Union has contributed $75 to aid in taking testimony showing that sweet clover was not a noxious weed, but a good honey-plant and an excellent bee-pasturage. The case will come up again for trial at the January term of the Court, and the Union is doing all in its power to secure justice for the Doctor.

[This suit came up for trial in January last, as stated, and was lost by Dr. Besse.—EDITOR.]

BEES "EATING" FRUIT.

O. W. Stearns, of Selma, Calif., had neighbors who claimed that his bees ate their fruit, and circulated a petition last June to have them declared a nuisance, and ordered to be removed. We sent the Union documents to each of his neighbors, showing that bees do not puncture the skins of fruit. We arranged for an attorney to attend the meeting of the Council, and present the facts in the case, but so far the petition has not been presented, tho it is six months ago. The prompt action of the Union doubtless settled the disturbance.

TROUBLE WITH FRUIT-MEN.

Mr. A. Unterkircher has an apiary at Riverside, Calif., and the fruit-men began proceedings to drive him away, averring that the bees destroyed their fruit. The Union's batteries were opened upon them, and a shower of documents in that locality proved that bees were incapable of puncturing the skins of grapes, etc. The Manager gave some points of law to the interested parties, which soon ended the trouble. Last January Mr. U. wrote to the Manager that he was proud of being a member of the Union, which had so completely silenced all his unreasonable opponents, and added: "No bee-keeper, great or small, can be at home outside of the Union. The bare statement that I was a member of the Union at once silenced all opposition."

AN INHUMAN NEIGHBOR.

John Uphouse, of Sedro, Wash., had an envious neighbor who, when a swarm had settled on his lot, and the son of Mr. Uphouse had watcht it, and went with a hiving-basket to bring it home, the neighbor attackt the son and shook the bees from the basket down over the boy's head, saying he hoped the bees would sting him to death. He was badly stung, and the inhuman neighbor was sued by Mr. Uphouse. The Union posted the attorney in charge as to the rights of bee-keepers to follow swarms and capture them, and dosed the neighborhood with decisions of the Supreme Court, and the pamphlet entitled, "Bees and Flowers." Now peace is restored in that neighborhood.

TROUBLE ABOUT A SWARM.

August Bachman, of Seattle, Wash., had a swarm last July settle in a neighbor's lot. His wife saw the swarm alight, but was refused permission to enter the premises to take the swarm away. The neighbor did not own the lot, but had the privilege of keeping chickens there. The owner gave written permission to Mr. Bachman to take the swarm, but the occupant refused to let him enter. He got a constable and took the bees away, but the neighbor claimed them as his property, and sued Mr. Bachman for them; and the justice decided in Mr. Bachman's favor. Then the neighbor appealed the case; and Mr. Bachman appealed to the Union for defense. Being a member of the Union we gave the points of law in the case to our attorney, who made good use of them, and the jury decided in favor of the owner, and the pugnacious neighbor had to pay the costs—another victory for the Union.

DECLARING BEES A NUISANCE.

Mr. W. A. Webster, a member in Pylema, Calif., last March reported that a petition had been circulated there, asking the Supervisors to prohibit the keeping of bees in that place by a city ordinance, and askt us for instructions as to what to do in the matter. We replied with advice, and documents for circulation. By posting the Board of Supervisors in advance about the unconstitutionality of such an ordinance if past, the members were fully prepared to deal with the matter, and promptly denied the petition. Thus defeated, they made trouble in Mr. Webster's apiary by overturning the hives and stealing the honey at night. We advised Mr. Webster to let it be understood that he was a member of the National Bee-Keepers' Union, and that we would make it *hot* for any one found meddling with the hives or bees. He did so, and that trouble also ceast.

COMMISSION MEN'S RATES.

In the case of S. T. Fish & Co., mentioned in my last Report, being a disagreement about the rate of commission on several carloads of honey, amounting to over $200—altho we have written scores of lettes, the important documentary proofs have not been produced on which to successfully establish the claim—several letters having been mislaid or lost. Until these are found no further progress can be made. We regret this, because we have already spent so much time, labor and expense on the case. The Chicago commission men repudiate the contract made by their representative at 5 per cent. commission, and claim that the 10 per cent. they deducted is their regular commission. When proof is produced the case can be continued, but not before.

DEPREDATIONS ON AN APIARY.

J. Kendall, of Blodgett's Mills, N. Y., complained that depredations were made on his apiary in the night, out of spite. We advised him to put up a sign stating that any one trespassing on his premises would be prosecuted—then if the miscreants could be found they would be dealt with according to law, and the Union would help to do it.

THREATENS TO POISON THE BEES.

Among the cases which are now on the docket is one in Pennsylvania, where a neighbor refused to allow a bee-keeper to enter a yard where a swarm had alighted, to capture it and take it to a hive—one that had a prized queen. Of course it went to the woods and caused a loss. In this case we have had a voluminous correspondence, as the neighbor threatened to poison the bees, and was otherwise pugnacious. We wrote to this neighbor demanding reparation. What the outcome will be is yet undetermined. It is not wise to give any further particulars in this Report.

DISPUTE ABOUT HONEY SALES.

Early in January Thos. C. Stanley & Son, of Fairfield, Ill., complained to the Union about the sale of some honey shipt to C. F. Muth & Son, of Cincinnati, Ohio, proposing that it be submitted to arbitration. We wrote to C. F. Muth & Son, and the matter was submitted to the following arbitrators: J. M. Hambaugh, A. I. Root and Eugene Secor.

Long documents were prepared by each party and sent to us, we forwarding these statements to each arbitrator, and having his decision reserved to be mailed to us on a certain day far enough in advance for all to come at once. These decisions were collated, summarized and reported to both disputants, who agreed in advance to abide the decision. This entailed much labor in type-written copies, documents, letters, etc., amounting to hundreds of pages.

The decision was rendered—then appealed from by C. F. Muth & Son—and re-submitted, reviewed, re-affirmed, and re-reported—covering a period of eight months, but the award of $10 to T. C. Stanley & Son has not yet been paid.

LAWS RELATIVE TO APIARIES.

Reports have been circulated stating that the laws of California compel bee-keepers to remove apiaries from the vicinity of fruit-drying establishments, and restricted the location of apiaries to certain distances from such. Hon. J. M. Hambaugh and others wrote to us inquiring as to the distances named, if such were legal enactments.

It was also reported that bee-keepers were required to shut up the bees during fruit-drying periods. Failing to do so, the bees may legally be enticed by poisoned sweets and destroyed. We were requested to look up the laws and ascertain what truth there was in such statements.

We went to the law office of a Judge of the Supreme Court, and made a thorough examination of the laws of California, but found no law in the Code containing any restriction relative to the location of apiaries, either specifying nearness to fruit-drying establishments or anything like it. Neither could we find any law allowing fruit-men (or any other men) to entice or entrap bees, for the purpose of destruction, under any circumstances.

The Judge who assisted us in this search has one of the largest law libraries in the State, and he assured us that there was absolutely no foundation for any such a report. If any such laws were enacted they would, he said, be unconstitutional.

This is an important matter, and we therefore mention it in this Report. Mr. Hambaugh was a member of the legislature of Illinois, and rightly concluded that if there was any such law "surely something is needed in the way of legislation in behalf of the bee-keepers of California." But such a law does not exist.

BEES NEAR HIGHWAYS.

Many threatened disturbances about bees being kept near highways have come up, and we have answered many letters advising bee-keepers to keep their apiaries far enough away to prevent the bees from being jarred by passing teams or annoyed by sweating horses, because either of these may cause trouble; to erect a high board fence where an apiary is near neighbors' residences, and otherwise to prevent annoyance. These matters have caused considerable correspondence, but have prevented many cases of neighborhood troubles.

Thomas G. Newman.

PUT A BEE-KEEPER IN JAIL.

Frank S. Buchheim, of Santa Ana, Calif., a member of the Union, in September, 1897, was arrested, under Sec. 370, of the Penal Code of California, for keeping 100 colonies of bees on his premises, charging him with maintaining a nuisance in the neighborhood, averring that the bees ate up and destroyed the fruit belonging to the neighbors, and interfered with laborers who were engaged in caring for the fruit, etc. His apiary and premises cover 7½ acres. He built a fence 6 feet high to enclose 24x32 feet, in which he kept the hives of bees during the fruit-drying season, thus controlling the bees and preventing annoyance to the neighbors. But they were not satisfied with these precautions, and demanded that the bees be moved out of that locality.

Suit was brought against Mr. Buchheim for maintaining a public nuisance, and he was fined $50 and costs. As he was a poor man with a large family to support, he did not pay the fine, and was committed to jail for 25 days.

After 10 days had elapst an appeal was taken to the Supreme Court, and he was releast pending appeal.

The Union being appealed to for assistance, we collated some points of law upon the case to aid the attorney, and gave advice on the course to be pursued, sending the Union's documents to be scattered among the interested parties. Meanwhile the Advisory Board decided that the Union should take part in Mr. Buchheim's defense. It is expected that the appeal to the Supreme Court will be heard in a short time, when a lively time will be given to the enemies of the pursuit.

ARE BEES A NUISANCE?

F. H. Hunt, of Redlands, Calif., has been sued by W. F. Whittier for damages, and prays for an injunction restraining him from keeping bees within one mile of his land, claiming that the bees befoul the water used for irrigating and domestic purposes, also sting men who work in the adjoining field to the apiary. Mr. Hunt's apiary was located there before Mr. Whittier planted his orchard, and should have prior right to the location—if there is to be any preference.

We have corresponded with the attorney in charge of the defense, and have given all the aid in our power, stating many points of law relative to the rights of bee-keepers, and furnisht him with the Union's ammunition, printed arguments and decision of the Supreme Court of Arkansas, etc. The trial is to come off on Jan. 12, 1898, and we hope will be another victory for the rights of apiarists.

This case is of unusual interest, for many California apiarists are in danger of similar lawsuits instigated by fruit-men who are sworn enemies of the pursuit.

Thomas G. Newman, *General Manager.*
2096 Market St., San Francisco, Calif.

[While we are a little late in publishing the foregoing report, it nevertheless will be interesting reading, as it shows what the National Bee-Keepers' Union did during the year 1897. But we are now enabled, by the delay, to show our readers—many of whom are Mr. Newman's old friends—a reproduction of his latest photograph, which, to us, seems to indicate that his residence in California has not tended to improve his health very much.—Editor.]

CONVENTION PROCEEDINGS

Proceedings of the Colorado State Convention.

REPORTED BY F. L. THOMPSON.

[Continued from page 310.]

The Honey-Industry in Colorado.

It seems that some member of the Horticultural Association lately claimed that our spraying law could not be enforced, and added something to the effect that bee-keeping was of small importance. I do not know who the man was, except that he was some Western slope man, and do not know his exact words.

I will consider his last assertion or implication first. Our Secretary has fairly reliable data to show that last year's product of the Eastern slope alone in comb honey was about 1,000,000 pound sections. I learn on good authority that Grand Junction sent out six carloads, and that the other portions of the Western slope sent out not less than six more, making 12 in all, or 240,000 pounds. Let us call the net gain on comb honey 5 cents a pound. That is surely low enough. Then 1,240,000 pounds of comb honey at 5 cents a pound represents a net gain to the State of $62,000. I do not know how much extracted honey was produced; doubtless several hundred thousand pounds.

VALUE OF HONEY.

The farm honey of the Western slope is also not included in the above estimate. All in all, the lowest estimate of the direct cash value of the honey-industry cannot be less than $70,000. But this is only half the story. R. L. Taylor, of Michigan, who was director of the Apicultural Experiment Station for several years, stated that the benefits arising from the cross-fertilization of blossoms by bees are worth more to the people at large than the cash value of the honey itself. He is a horticulturist as well as a bee-keeper. I have never seen that statement contradicted; and, indeed, I do not suppose it can be, as many proofs show that such benefits are great, not only to the fruit-men, but also to gardeners and farmers. We might, then, modestly place the value of apiculture at $140,000; but let us be very modest and say $100,000. Perhaps my intellect is very feeble, but I really am unable to see that an industry worth $100,000 is of small importance.

I know nothing of the comparative value of the fruit-industry; but we know that it has a Horticultural Board, whose mileage expenses are paid by the State, a Secretary with a salary of $1,000, two rooms in the Capitol, a library, a number of display cases, appropriate furniture, a high grade typewriter, stationery, etc.; possibly, on the whole, an annual expense of $1,500 to the State. Now, if the fruit-industry is worth $100,000 to the State, why do we not get $1,500? If it is worth $200,000 to the State, why do we not get $750? If it is worth $500,000, why do we not get $300? We have a few county inspectors, but the fruit people have theirs, too, except for the publication of our annual report, we get nothing from the State.

SEEMING INJUSTICE.

The truth of the matter seems to be that our legislators being only disposed to appropriate so much anyhow to industries benefiting the State, a few conceive it is to the interest of the industries already represented to keep others out, because every new sharer means a less share to each one. But if this is the case, I would recommend to those who discuss the matter to first recognize statistics to some extent. We bee-keepers may not be politicians, as some are, but we can see the sun at noonday; and if such motives peep out they put ideas in our heads that otherwise we might not have entertained. Injustice arouses a keener desire for justice. Judging by what the the fruit-industry receives, what ought another rural industry, contributing as do all rural pursuits to the health of the Nation, not only physically, but morally as well, to have a State appropriation when it reaches the value of $100,000? A room in the Capitol, expenses for displays both in and out of the State, advertisement of the value of honey as a far healthier food than cane-sugar or commercial glucose, this feature alone being worth more to the State than the whole would cost; a library, an executive administration, either independently or in connection with the Horticultural Board, and a remuneration for the exceedingly necessary and valuable services of a Secretary, which shall be in just proportion to that received by similar officials.

VALUELESS LAND USED.

Let us now suppose that the fruit-industry should be said to be worth some fixt sum of money to the State, such an estimate being based on the net value of the fruit alone. It has been suggested to me that if that were the only base of calculation, the result would be incorrect. The industry would really be worth less. For, as a rule, horticulture takes the best farming land—land that might have been put in grain, hay or potatoes; so that the real value of the horticultural industry, as such, is not represented by the net value of the crop, but by the difference in value between the fruit and the staple which might have been raised on the land the fruit-trees occupy. This will cut down considerably whatever figure may be assigned to horticulture, based on the net value of fruit; and this net value may sometimes be less than nothing, especially in the case of perishable fruit. Two producers of peaches at Montrose got back only enough to pay for the boxes.

On the other hand, estimates of the value of the honey-industry are influenced by no such consideration. Apiaries occupy an exceedingly small portion of land; and this land need not be, and generally is not, of any particular value for other purposes. Not only so, but the product is a spontaneous one in the form of floral nectar, which would utterly go to waste if not for the bees. The value of honey is a clear gain to the State, and, finally, what is not generally understood, honey is as valuable an article of diet as fruit, and should be as plentifully used. Being concentrated, it is one of our cheapest foods. It is not merely to be regarded from the chemical point of view as one of the sugars, but from a hygienic standpoint it is already what the other sugars have to be reduced to before they can be assimilated, thus saving the wear and tear of the system and the tendency to Bright's disease and kindred disorders which the free use of cane-sugar in modern times is causing. The muscular energy which science has discovered to be the result of sugar as food can be obtained in no safer way than by eating honey. It follows that the industry of honey-production is intrinsically valuable, as substituting a cheap and wholesome article for other more or less harmful members for an essential class of foods.

THE SPRAYING LAW.

About the other question, whether our spraying law can be enforced, not much need be said. It is a measure which is highly essential to the well-being of an industry worth $100,000 to the State, cases having already occurred in which spraying out of season caused direct and great loss to bee-keepers. It does not in any markt degree interfere with the welfare of other industries of the State. Unless these two statements are proved to be false, I do not see that the author of the assertion has any case. If I understand it rightly, he said that some trees would be blooming while others were not, hence the blooming season could not be defined strictly enough to apply the law. It seems to me this is splitting hairs. There is nothing to prevent one tree from being sprayed, when it has finisht blooming, while at the same time another tree is not sprayed because it is yet in bloom. The spraying law is in force in Vermont and Washington and the Province of Ontario and perhaps elsewhere, and we have heard of no such objections raised to it.

But it is not enough for us to show the emptiness of such strictures. The very fact that they were made causes a suspicion that a spirit unfriendly to us exists in certain quarters. Last spring it was the Grand Junction horticulturists who for some reason which they did not see fit to impart, opposed the addition of a clause prohibiting the exposure of poisoned mixtures on which bees will work. We gave way to them in that. Now somebody from the Western slope carries opposition a little farther. We are justified in asking "Why?" It is not enough that some Eastern slope fruit-man tells us he doesn't know of any reason for discussion among bee and fruit men. We want to know what is the matter with those Western people.

A PERSONAL STATEMENT.

I have thought that perhaps occurrences in which I was concerned, in both of which cases certain private letters got in the papers without knowledge or intention, may have caused some person or persons who were not acquainted with the facts to assume that such action was intentional, and that it was also done with the connivance of the bee-keepers at large; and, as an inference, that bee-keepers in general are rather a grasping set, who need to know their place. Such assumptions, if they continue to exist, as they have existed (and, by the way, I have never received any assurance that they have ceast to exist, tho I should have expected it), have not an atom of truth. Further, there is not the slightest danger that such assumptions will ever again be even apparently true; for in consequence of the implied ascription of malicious motives which has never been removed, and also because I realize that I have not the necessary business abilities, I have determined hereafter not to do any work for either of our associations which involves any business, except in the way of informal assistance to committees and officers. That settles that. The opposition must show other grounds for their hostility than anything connected with those occurrences, and it would be well for them to recollect that if bee-keepers can be injured in the eyes of horticulturists by mistakes which have the appearance, but not the reality of injustice, horticulturists will surely be injured in the eye of bee-keepers by the genuine article.

THE TIME TO SPRAY.

I am glad to state, however, that in spite of my rather discouraging experience, I suppose that the majority of fruit-men are disposed to be fair-minded and courteous. Mr. A. F. Reeves, the fruit-inspector of Montrose county, I think is such a man. He has made a study of entomology, and appears to be competent. He told me that the spraying law was all right, and a good thing; tho in one respect only it might not be entirely just in its workings, because once in several years a peach-louse makes its appearance, which can only be killed by spraying during bloom. A provision ought to be made to meet this exigency. I recommend that the association correspond with Mr. Reeves on the matter. Whatever provision is made should, of course, do away with the essential part of the law; for not only could we ill afford to have our bees killed by the bushel just at the critical period of their development, but the horticulturists themselves cannot afford to dispense with the services of the bees in securing cross-fertilization, which means more and better fruit; nor can they afford to overlook the fact that, with the small exception noted, they are simply wasting their spraying material in spraying out of season, because all the common insects injurious to fruit can only be reacht by spraying after bloom.

F. L. Thompson.

Mr. Devinney—No action was taken by the Horticultural Board on the matter.

Mr. Honnet—While some remarks were made, I cannot recollect anything of the kind as having taken place.

Mr. Milleson—If anything was said detrimental to our interests, I fail to remember it, with one or two exceptions. As County Fruit Inspector I have not met more than one or two who gave any indication of ignoring the law. Leading fruit-growers have no oppostion to it. It is almost univerally conceded that we have rights.

Pres. Aikin—I think that no feeling exists.

On motion of Mr. Devinney, the Association voted that the paper be given to the press for publication.

A LETTER ON SPRAYING FRUIT-TREES.

In the hurry of business the following letter from a bee-inspector of the Western slope was not read before the Association. It will be appropriate here:

"I think there will be a strong effort made to repeal the law that we workt so hard for last winter, with regard to spraying during fruit-bloom, and many are making threats now that they *will* spray while in fruit bloom. I cannot see why any sensible fruit-grower should want to kill off all pollen-bearing insects (bees included) that so greatly assist in the setting of fruit, and that at a time when they are all he does kill. We will do all we can by persuasion up till that time, and then if they insist on spraying, we (the bee-keepers) will see that they atone to the offended law."

A LETTER ON TAXING BEES.

The following letter from a bee-keeper was read, which had been sent to the Secretary of the Denver Bee-Keepers' Association, who, on account of absence, turned it over to Secretary Rauchfuss:

"What I am interested in as I suppose we all are, is the point as to the *legal* right of assessors to tax bees. All *property* is taxable unless specially exempted, *i. e.*, all property recognized as such by *law*. If I understand the scope of the decision of the Attorney General, it is clearly that bees are not property at law in Colorado, and therefore not subject to taxation. It is this phase only of the subject that has practical import to bee-keepers, for I cannot conceive how we can *protect at law* that which has no standing at law. Of course I know that we can *hold* bees, birds, fishes and other wild animals, and the law will not interfere, but in case of depredation by others, what is the remedy? What is their *legal* value? Can an assessor list for taxation? As I understand it, the right to assess carries with it the right of legal protection, and I am of the opinion neither obtains in our State. Situated as you are where you can in the name of the bee-keeping interest have a decision settling these points made, I conceive it would be of great value as determining what course bee-keepers ought to pursue in asking such legislation as may be necessary to surround our interests by the law's protection. I believe I, in my former letter, stated that it had been necessary to have dogs made property by enactment. Surely, they are much more readily held, valued, recognized and recovered than bees. I know that in many places they were taxt, but that was in the nature of a license to provide a fund against their depredations, or for protection."

Mr. Nichols—I am the assessor of Montrose county, and a heavy bee-keeper. I am not posted on the law. My business is merely to list for taxation. They have never objected to taxing bees in Montrose county. Yet many bee-keepers get little or nothing from their bees. The commissioners value every colony at $1.00. I think it is wrong, and that the assessor should fix the value. I believe a fixt valuation of colonies is just as unjust as a military tax, which was considered unjust at the recent assessors' meeting. A year ago I cut down the valuation of bees and equalized them, calling the best $1.00, some 75 cents, and others lower; but the Board of Equalization said one colony was as good as another, and placed the value of every one at $1.00.

Several members thought the county had no right to tax bees.

Mr. Rhodes—The real question is, Are bees property in law? Is there a value that can be recovered?

Mr. Nicholas was appointed a committee to interview the Attorney-General on the subject.

Officers were elected for the ensuing year as follows: President, R. C. Aikin; Vice-President, R. H. Rhodes; Secretary, Frank Rauchfuss, Elyria; Treasurer, Mrs. R. H. Rhodes; Member Executive Committee, B. Honnet.

The Committee on Organization and Marketing, consisting of Messrs. Elliott, Whipple, Pease, and Lyon, submitted a report which caused considerable discussion. Some favored the agency plan, some that of a supervision by a Board of Directors. The committee's report, embodying the latter plan, was not acted upon, but a resolution by Mr. Tracy was past, that the Association agrees to abide by the action of the committee. This gives the committee time to sound virus and perfect details. The result of their deliberations is expected to be made known at the spring meeting.

A complete recasting of the Constitution and By-Laws was presented by the committee for that purpose, and adopted by the Association, which it is believed will make the Association's work more effective than heretofore.

Mr. Nichols, by request, spoke of his scraping-machine for separators, which saves him some work and expense. The essential feature is two knives with springs.

THE BEE-INSPECTORS' REPORTS.

J. B. Adams, Boulder County—Total number of colonies inspected, 580; number diseased, 32; destroyed, 32.

Thos. A. Riggs, Arapahoe County—Number inspected, 942; diseased, 39; transferred, 26; destroyed, 13.

Peter Kranz, Otero County—Number inspected, 2,738; diseased, 27.

H. Porter, Jefferson County—Number inspected, 2,294; diseased, 15; destroyed, 15.

M. A. Gill, Mesa County—Number inspected, 2,733; diseased, 26; destroyed, 26.

Chas. Adams, Weld County—Number inspected, 18; diseased, none.

Mrs. A. J. Barber, Montezuma County—Number inspected, 192; diseased, 2; destroyed, 2.

Frank Rauchfuss, *Sec.*

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Trimming Down Brood-Combs.

When combs are very rough, is it a good plan to cut them down smooth in the flush of the season? CONN.

Answer.—You probably refer to irregularities on the surface of brood-combs. It's a good plan to trim down the worst of these at any time when convenient.

Langstroth and His Invention.

In the Bee Journal I often see a certain Mr. Langstroth mentioned. I suppose he is the inventor of a kind of hive or frame very valuable to bee-keepers. I would like to know something about him, especially the time and place he lived and died, and about his invention. WISCONSIN.

Answer.—Rev. Lorenzo Lorraine Langstroth was born in Philadelphia, Pa., Dec. 25, 1810. In 1852 he invented the movable frame, went to Oxford, Ohio, in 1858, and to Dayton, Ohio, in 1857, dying there Oct. 6, 1895.

Carrying Out Brood—Feeding Bees.

1. What is wrong with my bees? Two colonies began gathering pollen the first week in April, and seemed to be doing well, but now in the morning I find some of the brood on the alighting-board, some of which are about nine days old, I judge, and others have wings and eyes formed, some of which seem partly torn to pieces. Some of the former are alive when found. They are in old-fashioned box-hives, so I cannot examine inside very well. One of these colonies swarmed once last summer. The other did not.

2. I have another colony that did not swarm, and seemed to have very few bees all summer. This spring it has gathered no pollen. Are they queenless?

3. What is the best way to feed in box-hives? I intend to get rid of them as soon as possible. NEW YORK.

Answers.—1. The probability is that your bees were near the starving point, hence destroyed brood. Very likely the coming of fruit-blossoms has corrected the trouble.

2. If they carry no pollen when other colonies are carrying in plenty, they are likely queenless, and should be united with another colony. Make a hole in the top of the hive if there is none, then set the hive under another that has a queen.

3. One good way is to use the crock-and-plate method, making a hole in the top of the hive, then covering over so that no bee can get in from the outside without going through the hive.

Getting Bees on New Combs.

I have 10 colonies of bees in standard hives, the combs of which are old and have a great deal of drone-comb in them. I want to get the bees on full sheets of foundation and use the old combs for extracting purposes. I thought of fitting up other brood-chambers with foundation, and raising up the old hive, set the new one under with a queen-excluder between them, with the queen below. Will this do? If not, how shall I do it? INDIANA.

Answer.—Sometimes a queen will sulk without laying for some time if confined on foundation below, with brood above the excluder. Give her one frame of brood below by way of encouragement.

Building of Drone-Comb.

1. If a hive-body filled with frames containing starters be placed under a colony of bees, will they build as much drone-comb as they would if it were placed above them?

2. How would you proceed to have a number of brood-frames filled with comb and have as little drone-comb as possible when only starters are used in the frames, and the apiary run for extracted honey? NEW YORK.

Answers.—1. It would be more likely used for brood below, and on that account more likely to be worker; but if used for storing honey there might be no difference.

2. Have the comb built in weak colonies, and in colonies with young queens.

Gathering Pollen and Honey—Alfalfa.

1. Do bees gather honey and pollen at the same load?

2. Do bees get much honey from box-elder?

3. What is the general length of the alfalfa honey-flow?

4. Is there ever a failure of a honey-flow under irrigation?

5. We have thousands of acres of alfalfa, but most of it is kept for seed, and not irrigated, and that which is cut for hay is cut before the first bloom appears. Last year was my first year here, and I saw the bees working on alfalfa only about a week, just before frost. Alfalfa produces from 6 to 8 tons of hay per acre, and from 7 to 15 bushels of seed. Now, if you or any one else can tell me how to handle it, to get a honey-crop, I will be very much pleased. NEBRASKA.

Answers.—1. They often bring honey without pollen, and when they bring pollen they may bring honey with it, perhaps not very often bringing pollen without honey. Possibly that may not be the rule in all localities.

2. I think they do, but I may be mistaken.

3, 4, 5. I confess ignorance, and will be glad if our alfalfa friends will help us out.

Swarming—Cells of Old Combs.

1. Does the queen, or do the bees, cause swarming?

2. Do bees swarm after or before queen-cells are built?

3. Can a queen's wings be clipt with scissors? If so, how?

4. When comb is used for a long time for rearing brood, do the cells get small enough to make the bees under size (for each bee leaves a web, I am told)? IOWA.

Answers.—1. Both work together toward that end, but the immediate impulse to swarming at the time the swarm issues comes at times and perhaps always from the workers. It sometimes happens that a swarm issues when there is no queen in the hive, the queen having been taken away an hour or more before, the bees not having yet found out their queenlessness.

2. Generally queen-cells are prepared and well advanced before a swarm issues.

3. Yes. Hold the queen by the thorax or body (not by the soft hinder part) having the tail toward the hand that holds the scissors. Now cut off as much as you can conveniently from the two wings on the side next you (there are two wings on each side.)

4. Some think a difference in size of bees results. Perhaps most think there is no difference. I never throw away a brood-comb because of its age. The change made in cells is mostly at the bottom, making the thickness of comb greater, but not affecting the size of bees.

AMERICAN
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

EXECUTIVE COMMITTEE—Pres., George W. York; Vice-Pres., W. Z. Hutchinson; Secretary, Dr. A. B. Mason, Station B, Toledo, Ohio.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Bees by Freight—Important.—Last week we mentioned the subject of shipping bees by freight in less than carload lots. The petition has gone in to the Western Classification Committee, J. T. Ripley, Chairman, Room 604, Great Northern Hotel, Chicago, Ill. Now what bee-keepers are to do is this: Write the Committee *at once*, urging the granting of the petition at their next meeting, to be held at Colorado Springs, Colo., June 14. We trust that several thousand bee-keepers will write immediately, addressing as above. There seems good prospects of the petition being granted, if bee-keepers will but show their interest in the matter. Especially the prominent bee-keepers should write, but no matter how few bees you have, your letter will have weight. All letters should reach the Committee by June 5—*not later*. Better write *now*.

◆

Bee-Keeping Not a Nuisance.—We have received the following, dated May 16, from General Manager Newman, referring to a case mentioned in his Report, on page 324 of this number:

FRIEND YORK:—I am glad to inform you that Mr. Buchheim, referred to in my Annual Report as having been put in jail on the ground that bee-keeping was a nuisance, has, through the efforts of the National Bee-Keepers' Union, been fully exonerated, and his bail discharged. This was a case where the Union appealed from the Justice Court, which found him guilty of maintaining a nuisance and sent him to jail. I am just informed this morning of the success of our lawyer in the case.

This is another victory for the National Bee-Keepers' Union, which is fully in keeping with its victorious record in maintaining the rights of bee-keepers.

THOMAS G. NEWMAN,
General Manager.

Facing Cases of Comb Honey has considerable attention in the Review. Dr. Miller has a tilt with the editor, the latter claiming the battle because the former allows it to be the correct thing to put the best side of a section out, altho vigorously objecting to the practice of putting the best sections in sight. Mr. Doolittle stands firm on his former ground, giving the testimony of a commission man, who says it is his business to *know* what is in the middle of the case. Editor Hutchinson feels sure Mr. Hasty did not understand Mr. Doolittle, and thinks it well that Mr. Doolittle "has explained more fully." Whether Mr. Hasty or any one else besides Editor Hutchinson can see anything different from the explanation, remains to be seen. We stand right where we did on page 297. Wrong is wrong, and no amount of explanation will make wrong right.

◆

Death of Chas. F. Muth.—The following item was sent to us by Dr. A. B. Mason, being taken from the Toledo Blade:

"CINCINNATI, OHIO, May 16.—Chas. F. Muth, a prominent and wealthy merchant of this city, and recently elected member of the Board of Control, committed suicide on his farm near Morristown, Ind. He was found dead with a rifle-ball through his head. It is supposed to be a case of sudden insanity, as he was heard to complain of his head."

This is very sad, indeed. We have received no further particulars at this writing, but hope to have more next week.

◆

"Bienenzucht und Honiggewinnung nach der neuesten Methode. Kurz und klar dargestellt von J. F. Eggers, praktischer Imker bei Grand Island, Nebr. J. F. Eggers, Herausgeber und Verleger, Grand Island, Nebr." So reads the title page of a new book of 50 pages in which bee-keepers from Germany will find in their own loved mother-tongue in condenst form the principles of bee-keeping as practiced in this country. It is well up-to-date, and so simply and plainly written that it may well be recommended as a text-book to bee-keepers who are striving to master the intricacies of the German language.

The price of the book is 50 cents postpaid. It is bound in stiff board covers. Orders may be sent to the Bee Journal office.

◆

Don't Ship Comb Honey by Express.—While it may be somewhat early to say anything about shipping honey, we feel that we ought to refer to a case that came under our observation about two weeks ago.

A prominent Chicago honey-dealer sent for us to come and see a lot of comb honey that he had just received—from a bee-keeper about 50 miles from Chicago. The honey was put up in double-tier out-of-date 24-pound shipping-cases, and two of them had been fastened together by nailing pieces of lath across their ends. There was perhaps 500 pounds of beautiful honey in the shipment. But it wasn't so beautiful when the commission man received it. It was the worst broken up—and broken down—leaky lot of honey we ever saw. It was shipt by *express*. That, of course, explained it. We could scarcely believe it, when we were shown the shipper's letter, to find that he was an old, experienced bee-keeper, and yet knew no better than to ship such a lot of honey by express! Of course he doesn't read the American Bee Journal.

The producer, in his letter of instructions to the dealer, was very careful to tell how carefully the honey was graded, and how well it was put up; and that he expected a good price for it, of course. But we wouldn't have given 5 cents per pound for it. Why, we wouldn't have wanted such a mess at any price.

It seems strange that after the bee-papers have been so careful to tell honey-producers just *how* to prepare and ship comb honey, those that should know better will simply go on in their blindness, and then blame the commission man, very likely, if anything is wrong, or different from what was expected. And yet, if some folks think they know it all, and won't read, they will have to take the consequences, of course.

Now, *don't* ship comb honey by express. Put the shipping-cases of honey in large crates holding perhaps 200 pounds each, with several inches of straw in the bottom and at the sides of the crate. Then nail a 3 or 4 inch board on each side a third of the way down from the top, letting the boards extend about eight inches at each end, for handles by which two men will carry the crate. Honey thus packt will stand lots of bumping around, and will almost invariably reach its destination without any breakage whatever.

Pacific Bee Journal Discontinued.—We have received the following notice, dated May 8, and signed by Editor Bennett:

> The publication of the Pacific Bee Journal has been postponed, owing partly to my connection with the National Guards of California, who daily await orders from the Government to take the field; and partly to the lack of support owing to the unfortunate dry year. I intend to resume the publication at some fitting time, advancing all paid-up subscriptions. B. S. K. BENNETT.

Money but No Names.—We have received two letters accompanied by a dollar each, but the senders were evidently in such a hurry to pay up that they forgot to sign their names. On the envelop of one the postmark is "Pueblo, Colo.;" on the other, "North Adams, Mass." Will the guilty subscribers please write us at once, so that we can credit the money properly.

A War Relief Fund.—We appeal to our readers to join with us and thousands of other patriotic citizens throughout the country in raising within the next 30 days a relief fund of *one million dollars* to be placed in the hands of the American National Red Cross and of the Central Cuban Relief Committee, appointed by President McKinley.

We, with other publishers and merchants throughout the country, are volunteering to receive donations of $1.00 each for the fund. It has been arranged to present every one, who donates $1.00, with a copy of a beautiful picture, "The Accolade." This picture is a beautiful historical souvenir of this great uprising of the American people to defend and set free outraged Cuba. Every patriotic American should subscribe at once! Your help is needed! Our boys are at the front! Let us stand by them! We do not reserve any commission of any kind, and no profit is made by any persons from this fund.

The souvenir that is given in return for each dollar donated is a work of art fitted to adorn any parlor wall. It is a large picture, 18 by 38 inches in size. It presents Columbia, the allegorical figure of the United States, bestowing the Accolade on wounded Cuba. Judge Noah Davis, of New York, speaks thus of the picture:

> "The Accolade is the name of the kiss given as the final ceremony in the bestowment of Knighthood upon the worthy heroes of the Age of Chivalry. It was the token of love for noble deeds—deeds done in the cause of Virtue—in the defense of innocence and in the rescue of the humble and poor. It was therefore 'The Kiss of Love"—the tenderest and sweetest kiss when given in the cause of suffering and helpless humanity......It is well, then, that in this hour of her awful agony, America should clasp to her bosom the wretched and unhappy Cuba and give her 'The Accolade'—the kiss of charity and love, and the token of hope for peace and happiness, bestowed by a mighty people in the name of God and Liberty."

Now let every one of our readers send promptly to this office $1.00 toward this Million-Dollar Relief Fund. The cause will commend itself to every liberty-loving humane American.

Remember no commissions are paid to any one for raising this fund. The contributions go intact to the Relief Fund.

All help, and help at once.

THE WEEKLY BUDGET

MR. HAMILTON PIPER, of Calcasieu Co., La., writes:

"The American Bee Journal is good. The number for May 12 is worth a year's subscription to any bee-keeper."

MR. D. W. HEISE—the Ontario bee-keeping chap that noses around and picks up notes on bees wherever he can find them, for the Canadian Bee Journal—wrote us May 4 that his "bees are all right, but the weather unfavorable."

MR. E. W. BROWN, of Erie Co., N. Y., writing May 16, said:

"I had my first swarm May 13. It was brought down from the top of an apple-tree by my wife, while I was in Buffalo."

DR. PEIRO is now located at Central Music Hall, Chicago. Any of our readers contemplating consulting him are informed that the Doctor will be absent from his office during July. Appointments to see him should be made by letter in advance of starting, to insure certainty of personal interview.

MR. THOMAS G. NEWMAN, of San Francisco Co., Calif., writing us May 12, reported:

"The weather is cold and disagreeable here this spring. Fruit is killed, and of honey there will be none to spare, even if there is enough to keep the bees over."

MR. J. O. GRIMSLEY, of Pickett Co., Tenn., writing us on May 16, said:

"A *very* backward spring, but bees are working nicely now. Poplar is just in bloom."

Mr. Grimsley edits the bee-department of The Ruralist—a monthly paper publisht in Maryland.

MR. HARRY S. HOWE is the Secretary of the New York State Association of Bee-Keepers' Societies, organized at Geneva, N. Y., March 16. Mr. Howe's picture appears in the May American Bee-Keeper. He has become famous in his section of the country as the lightning extractor of honey and general all-around apiarian hustler. Howe's all right, "any-Howe."

REV. W. ANDERSON, of Bureau Co., Ill., called on us May 18, when attending a convention in the interest of his (the Congregationalist) church held in Chicago at that time. Mr. Anderson has some 30 colonies, and finds their care both pleasant and profitable. There doubtless are many preachers throughout the country that might find it to their advantage, both physically and financially, to have a few colonies of bees upon which to spend their leisure hours.

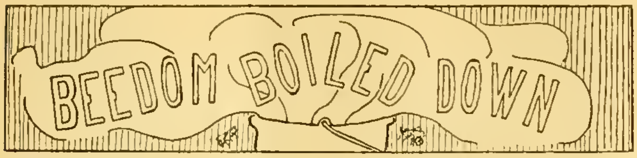
MR. G. M. DOOLITTLE, of Onondaga Co., N. Y., writing us May 12, said:

"Since March our spring has been wet and cold—so wet that farmers are 'blue' on account of not being able to get in their crops, and bees have had only two days in which they could get anything from hard maple and willow—the only thing in blossom so far. Bees are really in poorer condition now than they were the middle of March. I will have to feed soon unless good bee-weather comes."

EDITOR HUTCHINSON'S father-in-law died May 1, at the age of 74 years. He was a bee-keeper over half his life. Mr. Hutchinson says:

"I remember with pleasure the visits that I made him when scarcely out of my 'teens,' to 'talk bees.' It was during these visits that I made the acquaintance of the girl who has since been my good wife."

Yes, of course Mr. Hutchinson made those visits to "*talk* bees" to the father, and finally talkt "honey" to the daughter. Great scheme that. Favorably impress the parents, and half the battle is won—sometimes.



An End-Spacer at the Bottom of the frame is strongly recommended by the American Bee-Keeper. A staple driven into the end of the bottom-bar, projecting ¼-inch, so that in rapid handling there will be no danger of crushing bees or queens between the end-bar and wall of hive.

Lime Good for Sweet Clover.—J. E. Crane, in Review, strongly endorses the idea that lime is needed for sweet clover, by saying that at the great marble quarries at Rutland, Vt., sweet clover grew in great luxuriance on the heaps of waste where to the depth of 20 feet there was nothing but marble, or pure lime.

Breeding Out the Swarming Instinct.—"If the desire to incubate has been so nearly bred out of some breeds of fowls," says J. E. Crane, in Review, "why may we not breed out the disposition in bees to swarm? I believe it can be done; and with far less labor and time than the desire in fowls to incubate has been eradicated."

Comb of Buckwheat Heavier than Clover.—"When we take the same brand of foundation and supply it to bees gathering clover honey, and to bees gathering buckwheat honey, we find invariably that there is a very much larger amount of added wax in the case of the buckwheat than in the case of the clover," says Prof. Shutt, in Canadian Bee Journal.

Strength of Flavor in Honey depends somewhat upon the yield, according to E. E. Hasty, in Review. The quantity of essential or flavoring oil seems to be about the same whether the secretion of honey be much or little. Same with coloring matter. So in a heavy yield both color and flavor will be light, and vice versa. Basswood honey is sometimes yellow by scant secretion, and apple honey over-flavored and bitter.

Section-Cleaners, so far, have generally been of sandpaper, which soon clogs and demands renewing. J. E. Crane, in Gleanings, thinks there might be a solid cylinder of emery, a cylindrical spring-wire brush, or a cylinder with knives so set as to wind around it like the threads of a screw, which last would not be likely to clog, or if it did it could be easily cleaned with the point of a knife while revolving very slowly.

Cane vs. Beet Sugar.—Dr. Miller asks in British Bee Journal whether definite experiments have been made as to relative value of the two for feeding bees. The editor says although no experiments have been specially made, it is generally accepted as a proved fact in England that the chemicals employed in making beet sugar are injurious to bees, and strongly advises the use of none but refined cane-sugars.

A Conspiracy seems to be hatching in the brain of the Noter and Picker of the Canadian Bee Journal, who has evidently noted this Boiler as one to be pickt upon, and he is trying to poison the mind of that innocent youth, E. E. Hasty, inciting him to deeds of darkness by speaking in some heathen tongue such words as "exterminateannihilatereducehimtoashadow." Such things in a civilized country are dreadful!

Basswood.—"I find by going over my diary that my bees have averaged fully 50 pounds per colony from basswood alone, each year, during the past 25 years....I never knew of but one season when basswood did not furnish some honey, and that was the last....When the secretion is at its best, I doubt whether there is such a thing as overstocking a good basswood locality, if 1,000 colonies were located all in one place."—G. M. Doolittle, in American Bee Keeper.

Apple-Bloom is highly valued by G. M. Doolittle, as it is by many others. It comes at a time when it tells greatly on the development of the colony, making it ready for the white clover harvest. As Quinby says: "This season often decides the prosperity of the bees for the summer." The best year Doolittle ever had for apple-bloom was 1877, and that year he got his biggest crop of honey, averaging 166 2/3 pounds per colony, spring count, mostly comb honey. One day in apple-bloom he timed the bees. At 8 o'clock the number of bees that entered the hive in a minute averaged 43; at 10 o'clock, 49; at 1 o'clock, 51; at 5 o'clock, 43. A hive that was weighed gained 8 pounds 2 ounces through the day, and lost 3 pounds 2 ounces by evaporation through the following night, making a net gain of 5 pounds of honey for the day's work, showing that the nectar was very thin.—Bee-Keepers' Review.

A Little Scrap About the Plain Section takes place in the Canadian Bee Journal between Editors Root and Holtermann. The former doesn't want his firm clast as a swindle by pushing what Holtermann calls "a decided humbug." Holtermann replies he only meant it was "a piece of nonsense or folly." Root asks the statement to be pointed out where he said a section without bee-ways would *in itself* give fatter combs, or that a tall section is better filled out than a square one. To this request no reply is made.

Do Not Overstock Your Field.—Suppose within range of your bees throughout the summer there are 4,000 pounds to be gathered, and 80 pounds per year are necessary for each colony for their own use. If you have 50 colonies, and there are no other bees in the neighborhood, your bees will live through but afford no surplus for you. If, however, you have only 25 colonies, and these can gather all the honey, there will be 2,000 pounds of surplus for you. Something to think about.—Bienenzucht und Honiggewinnung.

Cane vs. Beet Sugar.—"There have been cases of dysentery in this county during the past winter, the bees were able to take flights almost daily up to end of January, showing that either cheap beet sugars are often used in preparing bee-food, or that, if cane sugar is used, the food is very badly prepared. I always make my bee-food from cane-sugar, besides feeding up a number of colonies for procrastinating bee-keepers in order to save them, and have not had a single case of dysentery," says Wm. Loveday, in British Bee Journal. He thinks America is just the place to make definite experiments as to using beet sugar for winter, where bees are confined four or five months in cellars. Isn't most of the sugar used for wintering in this country beet sugar? and isn't cane better?

Measurements of Comb-Bases.—The editor of Gleanings (p. 357) says they have a micrometer that measures "the ten-thousandth part of an inch as easily as you would measure off eighths of an inch on a foot-rule," and he has been measuring septums. He thinks the bees do thin the base of foundation slightly. Prof. Beal's measurements, as given in Review, made the base of extra-thin .0056, drawn foundation nearly .0100, Bingham no-wall .0043, and natural about .0067. Editor Root's measurements made the base of natural comb only about half as much, averaging from .0030 to .0036, and he thinks Prof. Beal must have used comb that was built when honey was coming in very slowly. Extra-thin Mr. Root found .0050 to .0060, about the same as Prof. Beal, and thin foundation running 11 feet to the pound .0071. He thinks the drawn foundation can be made with much thinner base by using the natural instead of flat base. He *hopes* they will be able to make the 18-feet-to-the-pound foundation with base .0030, which will defy connoisseur or micrometer to detect the difference between it and the natural product of the bee.

Drawn-Out Combs, or unfinisht sections, to be used over again, are discust somewhat fully by Dr. C. C. Miller (Gleanings, page 342.) While leaving a loop-hole for possible retreat by saying that he is ready to change his opinion upon sufficient evidence, he combats vigorously the idea previously held by the editor of Gleanings that for good results the cells must not be more than ⅜-inch deep, and challenges proof that B. Taylor ever intended leveling for any other purpose than to remove whatever of the edge might be objectionable, and claims it is a waste to cut down a cell, no matter how deep, after such objectionable part is removed. "One reason given for having cells not more than ¼-inch deep is that, when deeper, the comb is tough. If there is any difference, ought not the part of the comb last made be the most tender? Then why cut away that, leaving the toughest part? Another is that with cells more than ¼-inch deep, the honey is not as thick and of as nice quality....If it is true that a cell ⅜ or ¼ deep is better than a deeper one just because of its depth, I don't for the life of me see how it is possible to get away from the logical conclusion that the greater the depth the poorer the honey, and the less the depth the better the honey, the best honey of all being produced on the Michigan no-wall foundation."

GENERAL ITEMS

Bees Doing Well.

I had three swarms last week during fruit-bloom, and all are doing well. Who can beat that? Alfalfa blooms in two weeks. Kansas is all right.

SILAS HARTER.
McPherson Co., Kau., May 15.

* * *

Colonies Short of Stores.

Bees have wintered very well, but we are having a very backward spell for them just now, and they are short of stores.

CHAS. ALEXANDER.
Onondaga Co., N.Y., May 16.

* * *

Too Dry in California.

It is too dry here. No honey in California this year. Most of the bees will starve if not fed. I have 75 colonies, and only two swarms, up to date.

DAN CLUBB.
Tulare Co., Cal., May 9.

* * *

Looking for Swarms Daily.

My bees have wintered well. I have 80 colonies, losing two in wintering. The Italians robbed them. I am looking for swarms every day.

P. E. CAMFIELD.
Shelby Co., Ill., May 16.

* * *

Beats Previous Records.

The weather has not been very warm so far this spring, but my winter and spring loss at the home apiary is only one colony out of 73, and this present condition beats all previous records, as over ¼ of them have queen-cells, ready for swarming, and fruit-bloom is only commencing to open.

FRANK MCNAY.
Columbia Co., Wis., May 10.

* * *

Good Indications Now.

Fruit-trees are in full bloom, and the bees are working heavily on them, but we were having rain for the last three days, so they could not work. I put 18 colonies into winter quarters, and did not lose one—all came out good and strong. The indications at present are for a good honey crop this year.

JOHN H. RUPP.
Washington Co., Kan., May 17.

* * *

Italian Bees' Honey—Foul Brood.

Mr. A. W. Hart, on page 269, asks how it is that the Italian bees produce a finer quality of honey than the blacks or others, when all have access to the same forage. The editor thinks here is a chance for some one to distinguish himself. Let me take that chance.

You know, nature and the breeder's influence create different constitutions. For example, take 10 cochins with 10 leghorns. Let all have access to the same forage and you will have different quantities, qualities and even colors of eggs. What's the cause? You say, "Well, Asiatic hens are more flesh-producing; and Mediterranean hens more egg-producing." That's right, but that's not all. Nature and the breeder's influence did something besides that. It made

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the leghorns active, and this activity made them hardy. So a leghorn hunts and hunts; it gets all that makes an egg fine and rich. With bees it is the same. Italians are more active and more hardy than others. You may see them flying soon in the morning and late in the evening, when others stay at home. So they have more chance to produce fine honey than others. Certainly, the bees "make" the honey, but first they must have something to make it from. It is not red clover they need, but they need plenty to select the best. Therefore do not breed from all Italian colonies—breed only from the most active. As a rule, even Italians show exceptions.

Mr. E. S. Lovesy, of Salt Lake Co., Utah, gave a copy of Utah's new foul brood law, providing that an inspector shall visit all colonies of bees at least once a year, and as many more times as may be necessary. Such inspections of hives without a good education of bee-keeping is monstrous. Don't call a State-guard when you may guard yourself. Perhaps Mr. Lovesy will be kind enough to tell why Utah's bee-keepers can't guard themselves as well as an inspector can. J. VOLKERT.

Chesterfield Co., Va.

All Wintered.

I have 34 colonies that I wintered outdoors, and they have come through in good condition. My wife and I examined the 24 colonies to-day, and clipt the queens in all but two, where there were so many bees I could not find her. During the past year I have sold $160 worth of honey, besides using all we wanted, which is a large quantity, as I have a large family. LUTHER BROWN.

Litchfield Co., Conn., May 10.

No Loss in Wintering.

We wintered 30 colonies of bees without a single loss. All are now very strong except one. They work well whenever the weather is warm enough. There is a little new honey and plenty of old in the brood-chambers. We expect a good season and ready market for all the honey we can get.

The American Bee Journal is a wonderful help to me. F. C. MCCLAIN.

Mason Co., Mich., May 12.

Perforated-Tin Section-Cleaner.

Believing that I have solved the difficulty connected with the use of sand-paper for cleaning sections, I thought possibly it might interest the readers of the American Bee Journal to know how. I have a frame made like the Aspinwall, having a small roller like his, also a disk 12 inches in diameter, but I believe Mr. Aspinwall has given us the only correct principle, as a disk brings the work too far from the shaft, thus requiring too much power for a foot lever.

With a 2½-inch roller I first cover it with tin tackt on for protecting the wood from hot water or fire. Next I cut another sheet of tin the size to cover the roller. This sheet I tack on a smooth, hard board, then with a little nail filed to a long, tapering point I perforate this sheet as closely as can be done, never driving the nail up to where it is even sized, thus leaving the perforations like an inverted cone. When done, tack this sheet on the roll, tightly sinking the tack heads with a

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January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

Mr. Bingham, Dear Sir:—Please send per mail a 4-inch Smoke Engine. I have one of your Smokers; it is too small in time of trouble.

February 21, 1898. A. F. SEWARD, Riverside, Calif.

9A9t **T. F. BINGHAM, Farwell, Michigan.**

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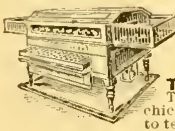

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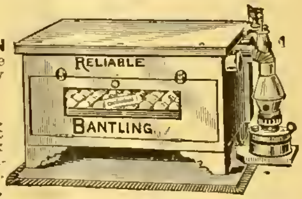

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Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y.

BEE-KEEPERS! Let me send you my 64-page Catalog for 1898.
J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing

Frank B. Barkley Mfg. Co., 835 Old Colony Building, Chicago, Ill., will sell you a spray pump, gas engine, or cider press, direct from factory.

punch. Now run the machine rapidly, holding a file lightly on these sharp points, until the work done on sections is smooth.

I think by following these directions you will have the very best section-cleaner that has come to my notice. It does the work smoothly and rapidly, and these little cone points show little tendency to clog, but the propolis is almost entirely removed by holding a piece of soft wood on, and reversing the machine; but it can be cleaned with hot water or steam, or by holding a blaze under it may all be burned off.

This has the merit of being cheap. Any one can make it. It is also durable, as one will last years; and last, but not least, I believe it can be made to satisfy every demand for good work. My large belt wheel is 21 inches in diameter, the belt pulley above is 1½ inches, with 2½-inch roller. These put on a ⅝-inch shaft giving very high speed.

Montrose Co., Col. JNO. S. BRUCE.

Eupatorium Aromaticum.

The plant sent by Mr. Bucy, of Kentucky, is one of the large genus *Eupatorium*, to which belong the bonesets, thoroughworts, Joe pye weeds. The plant in question is probably *E. aromaticum*.

Prof. Cook says of the Eupatoriums, speaking of July plants, for honey purposes: "Now commence to bloom the numerous Eupatoriums, or bonesets and thoroughworts, which fill all the marshes of our country, and the hives, as well, with their rich, golden nectar."

All the Eupatoriums, as I have before stated, are well worth cultivating by bee-keepers for their superior honey-producing qualities.

H. S. PEPOON, M. D.

[Dr. Pepoon is the biologist in the Lake View High School. Flower samples may be sent to him at 539 Byron Street, Chicago, Ill. He will then report on them through the Bee Journal, if so requested.—ED.]

Wintered Well and Booming Now.

Bees are booming, and swarming since the first of May. I have some colonies that are storing honey in the sections, from fruit-bloom. I have 17 colonies—did not lose one during the winter—and were all on the summer stands. I have never before had such a strong, clean lot of bees at this season of the year, and will say for the benefit of "Iowa," on page 294, that I gave them top ventilation, too, but with different results.

I started with 12 colonies last season, which gave me 526 pounds of comb honey, mostly clover. My bees carried in pollen on the first day of March, and on the first day of April drones were flying. How is that for Western Pennsylvania? T. C. KELLY.

Butler Co., Pa., May 16.

Honey from Willows, Etc.

My bees did well last season, altho my neighbors' bees did nothing. I got from 100 to 125 pounds per colony, and we have good prospects this season, if we get rain soon enough to keep clover booming, for that is our main flow. I got about 24 pounds per colony this spring from white willow.

I have to believe our success is from

$100

Given as Bounties to purchasers of the improved Danz. Hives and Sections See schedule in my bee-book "Facts About Bees." Tells how to produce honey that sells for the most money. Free for 2c in stamps. Address
THE A. I. ROOT CO., Medina, Ohio,
or F. DANZENBAKER, Box 466, Washington, D. C.

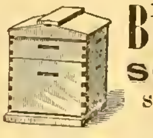
Please mention Bee Journal when writing.

Excelsior Incubator and Brooder Cheap.....

200 eggs capacity. Good as new. Used for only two hatches. Everything complete. Will sell it for
TWENTY DOLLARS, half the cost price
Address, **P. W. DUNNE,**
River Forest, Cook Co., Ill.

Texas Queens

Best honey-gathering strain in America. Tested, $1.50. Untested, $1.00. Write for a Circular. **J. D. GIVENS, Lisbon, Tex.**
7A26t Please mention the Bee Journal.



BEE-KEEPERS' SUPPLIES!
Largest and Best equipt Factory in the
SOUTH-WEST.
Send for Catalog.
FRED A. DALTON,
1A26t WALKER, Vernon Co., MO.
Please mention Bee Journal when writing.

Queens, Bees and Bee-Keepers' Supplies

Tested Queens in April and May, $1.00. Untested, 75c. Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

F. A. CROWELL,
8Atf GRANGER, MINN.
Please mention Bee Journal when writing.

Bees for Sale in Indiana!

Italian Bees in 8-frame Langstroth hives. Per colony $5.00; 5 or more at one time $4 50 per colony. I have only a limited number for sale. They are strong colonies, and ready for business. Address, **W. H. WATTS,**
19Atf **Ross, Lake Co., Ind.**

"WATCH POUDER'S AD"

SEE THAT WINK!

Bee-Supplies! ROOT'S GOODS at Root's Prices.

Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Catalog free. **Walter S. Pouder,**
512 Mass. Ave.,
INDIANAPOLIS, INDIANA.

QUEENS Italian stock. Untested, 70c each; 3 for $2 00 After July 1, 50 cents each; tested, $1.00 each. **Root's Goods at Root's Prices.** Prompt shipment and satisfaction guaranteed. Catalog free
THEODORE BENDER,
20Atf **Canton, Ohio.**

First Excursion of the Season to Cleveland

via Nickel Plate Road, June 3 to 6, inclusive. $11.35 for the round-trip on certificate plan. Tickets good returning until June 13, inclusive. Three through trains daily from Van Buren Street Passenger Station, Chicago. For further information address J. Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone Main 3389.

reading the Bee Journal. When I first took the Bee Journal my wife would hardly notice it. She said that was the driest truck she ever tried to read. But now if I come home Thursday nights without it, the first thing I hear is, "Where is the Bee Journal?" The only excuse I have is, "I haven't been to the post-office." Then she says to the little girl, "Won't you go and get it for *papa?*" But when it comes, mamma's hand is ready to receive it, and see the new items. I got her to read it by asking her to read aloud to me.

My bees wintered nicely without any loss whatever, and they came out of the cellar good, strong colonies.

NATHAN RICHARDSON.

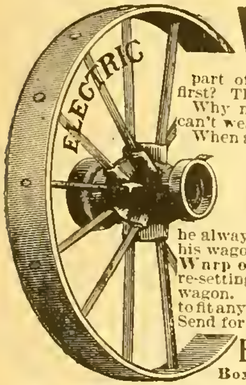
Steele Co., Minn., May 16.

Excursion to Cleveland.

The Nickel Plate Road will sell tickets from Chicago to Cleveland and return at a fare and one-third for the round-trip on certificate plan, good going June 3, 4, 5 and 6, and good returning until June 13, inclusive, on occasion of the annual meeting of the Congregational Home Missionary Society in that city. This rate will be $11.35 for the round-trip, which is somewhat lower than via other lines. Those desiring space in sleeping-cars should make early application in order to secure the best accommodations.

Any further information cheerfully given by addressing J. Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone Main 3389.

Frank B. Barkley Mfg. Co., 835 Old Colony Building, Chicago, Ill., will sell you carts, wagons, buggies, carriages and harness direct from factory. 21A4t



WHAT part of a wagon wears out first? The wheels, of course. Why not buy wheels that can't wear out? When a man buys the

ELECTRIC WHEELS

he always has good wheels on his wagon. **They can't Rot, Warp or become Loose;** no re-setting of tires; they fit any wagon. We also make wheels to fit anything wearing wheels Send for circulars and prices.

Electric Wheel Co.
Box 16 Quincy, Ills.

Please mention Bee Journal when writing.

COMB FOUNDATION **Wholesale and Retail.**

Working Wax into Foundation for CASH **A Specialty.**

Hives, Sections, and a full line of Supplies. The **best** of everything. Write for Catalog, with prices, and samples of Foundation and Sections.

BEESWAX always wanted for cash or trade.

GUS DITTMER,
AUGUSTA, WIS.

Please mention Bee Journal when writing.

WOVEN WIRE FENCE

With our Duplex Automatic Machine you can make a genuine Rabbit-Proof fence, and one that is also Horse-high and Bull-strong for **16c. A ROD** a Hog fence for 12c, and a Stock or Chicken fence for 18c a rod. Plain, Coiled Spring and Barbed wire to farmers at wholesale prices. Catalogue Free.

KITSELMAN BROTHERS, Box 138. Ridgeville, Indiana.

45Dtf Please mention the Bee Journal.

Page & Lyon Mfg. Co. New London, Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

Please mention the American Bee Journal. 7Atf

Italian Bees For Sale !!

We have arranged with a large bee-keeper in Lee County, Ill., (about 100 miles west of Chicago), to fill our orders for Italian Bees at the following prices there, which include a good Queen with each colony:

8 L. frames of bees in light shipping-case, $3.75
5 at $3.50 each.
8 L. frames of bees in dovetailed hive, $4.25.
5 at $4.00 each.

Prompt shipment after May 1. and safe arrival and satisfaction guaranteed. Address

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

Please mention Bee Journal when writing.

The Largest and Most Complete Stock

Of Bee-Keepers' Supplies in the Northwest. The very latest up-to-date and best Hives made, Danzenbaker Hives. Hives for Slotted Sections, and a very low-priced Hive, and carloads of other goods, all in our warehouse ready to ship.

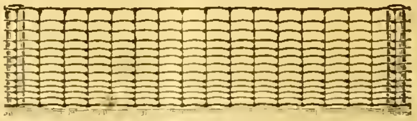
THE A. I. ROOT COMPANY,
H. G. ACKLIN, Manager.
17A5t 1024 Mississippi Street St. Paul, Minn.

Please mention Bee Journal when writing.

Cash PAID FOR Beeswax

For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 27 cents per pound, CASH. No commission. Now if you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

GEO. W. YORK & CO.
118 Michigan st., CHICAGO, ILL.



Armed Intervention

is not necessary to the peace of stock or safety of crops about which **Page Fence** is erected..

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Please mention Bee Journal when writing.

—ITALIAN—

Bees and Queens

Queens $1.00; Bees by the pound $1.00; Nuclei, two frames with Queen, $2.00; one-frame $1.50. Also **Barred and White P. Rocks and Silver-Laced Wyandottes.** Eggs for Sitting at $1.00 per 15.

17A8t **Mrs. A. A. Simpson, Swarts, Pa.**

Please mention Bee Journal when writing.

ONE MAN WITH THE UNION COMBINATION SAW

Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery Sold on Trial. Catalogue Free.

SENECA FALLS MFG. CO.,
46 Water St SENECA FALLS, N. Y

Please mention Bee Journal when writing.

RUMELY ENGINES

either **Traction, Portable, Semi-Portable, Simple and Compound** represent full engine value. Make also **Threshers, Horse Powers, Saw Mills, etc.** Each is the **best of its kind** for the purpose. More about them in our descriptive catalogue—**SENT FREE.** Write for it to-day.

M. RUMELY CO., - LA PORTE, IND.

Listen! Take my Advice and Buy

Your Bee-Supplies

FINE FOUNDATION AND TONS OF IT. Working Wax into Foundation a Specialty. **of August Weiss !** **I DEFY competition in Foundation**

Millions of Sections—Polisht on both Sides !!

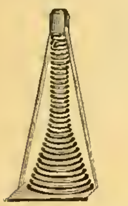
SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalogue and be your own judge. Wax wanted at 26 cents cash, or 28 cents in trade, delivered to me.

AUGUST WEISS, Hortonville, Wisconsin.

DR. PEIRO,

CENTRAL MUSIC HALL, CHICAGO.

Please mention Bee Journal when writing.



Queen-Clipping Device Free

The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 30 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

FREE FOR A MONTH.

If you are interested in sheep in any way you cannot afford to be without the best and only weekly sheep paper published in the United States.

WOOL MARKETS AND SHEEP ☘ ☘ ☘

has a hobby which is the sheep breeder and his industry, first foremost and all the time. Are you interested? Write to-day.

Wool Markets & Sheep, - - Chicago.

Please mention Bee Journal when writing.

BEES, HONEY, MONEY

Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

J. P. H. BROWN, Augusta, Ga.

Catalog Free **A. I. Root & Co's Goods** for Missouri and other points, to be had at factory prices from **John Nebel & Son, High Hill, Missouri.** 9Atf

Please mention Bee Journal when writing.

BEES! Florida Italian QUEENS!

Tested Queens. $1.00 each; Untested, 50c. Prompt and satisfactory dealing.

Address, **E. L. CARRINGTON,**
11Atf De Funiak Springs. Fla.

Please mention Bee Journal when writing.

Bee-Hives, Sections, Shipping-Cases—everything used by bee-keepers. Orders filled promptly. Send for catalog. MINNESOTA BEE-KEEPERS' SUPPLY MFG. CO., Nicollet Island, Minneapolis, Minn.

Please mention Bee Journal when writing.

Van Deusen Thin Foundation...

We have several 25-pound boxes of Van Deusen Thin Flat-Bottom Comb Foundation for sale, at $12.50 per box. This Foundation is preferred by many. As we have only a few boxes of it, an order for same should be sent promptly. Address **The A. I. Root Co.** 118 Michigan Street, Chicago, Ill.

Congregational Home Missionary Society

meeting will be held in Cleveland, Ohio, June 7 to 9, inclusive, account of which the Nickel Plate Road will sell tickets at $11.35 for the round trip on certificate plan. Dates of sale June 3, 4, 5 and 6, inclusive. Tickets good returning until and including June 13. For further particulars address J. Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone Main 3389.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, May 19.—Very little call for honey, and the offerings also limited. Prices without change from late quotations. California extracted sells well and the stocks here are light. Weather now warm and prospects generally reported good in the surrounding States. Beeswax scarce, and 27 to 30c is bid for it. R. A. BURNETT & CO.

Kansas City, May 19.—The supply of 1897 comb and extracted honey is about all sold. Considerable inquiry for new comb. Something fancy would bring a good price.
C. C. CLEMONS & CO.

Cincinnati, May 21.—Demand is slow for all kinds of honey, especially comb. Prices for best white comb honey, 10 to 13 cents. Extracted honey brings 3½ to 6c. according to quality. Beeswax in good demand at 25 to 28c for good to choice yellow.
CHAS. F. MUTH & SON.

Boston, May 20.—Fancy No. 1, in cartons. 13c.; in glass-front cases, 12c.; A No. 1. 11c.; No. 1, 9 to 10c.; No. 2. no sale. Extracted, white. 6@7c.; light amber, 5@6c. Beeswax is in very light supply, and if pure would readily bring 27c.

There is nothing new to note in our market for honey. As usual at this time of year, the demand has dropt to almost nothing, but as the supply is light, prices are well maintained and firm. BLAKE, SCOTT & LEE.

Cleveland, May 20.—Fancy white, 12 to 12½c.; No. 1, 11c; No. 1 amber, 9 to 10c.; buckwheat, 8c. Extracted, white, 6c.; amber, 4 to 5c. A. B. WILLIAMS & CO.

San Francisco, May 11.—White comb, 8½ to 10c; amber, 6½ to 7½c. Extracted, white, 5½@6c.; light amber, 4¾ to 5¼c. Beeswax, 23@25c

The French bark Alice, sailing Sunday for London, carried 135 cases of extracted honey. This will probably be the last shipment to Europe for some time. Stocks of extracted are now very light. Comb is still in fair supply. Values throughout are being well sustained.

Detroit, May 21. — Fancy white honey is lower and now quoted at 11c. No. 1, 9@10c; fancy dark, 7@8c; No. 1 dark, 6@7c. Extracted, white, 5@6c; dark, 4@5c. Beeswax 27@28c.

There are no changes in quotations, and very little desirable honey left. Sales are so slow that it is difficult to quote. The poor lots are being pusht at what they will bring.
M. H. HUNT.

Minneapolis, May 20.—Honey much more encouraging. Fancy white clover comb is selling here now at 10½@11½c. Not advisable to ship darker than amber. Extracted fancy white clover, 5½@6c; amber, 5c; dark, 4@4½c.

Outlook for honey much more encouraging.
S. H. HALL & CO.

Indianapolis, May 21. — Fancy white 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand. WALTER S. POUDER.

Milwaukee, May 20.—Fancy 1-pound sections, 11@12c; A No. 1, 10@11 cents; No. 1 8@10c; amber, 8@8½c; dark, 7@7½c. White extracted in barrels and kegs, 5½@6c; amber, 5@5½c. Beeswax, 26@28c.

The demand for honey continues very good indeed, and values fairly sustained. While the best grades are most salable, the inferior grades meet attention, and the movements are quite satisfactory. A. V. BISHOP & CO.

Buffalo, May 21. — There is a very good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

St. Louis, May 20.—Fancy white comb. 10 to 11c.; No. 1. 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.
WESTCOTT COM. CO.

Convention Notices.

Central California.—The next annual meeting of the Central California Bee-Keepers' Association will be held at Hanford, Cal., Wednesday, June 1, 1898, at 10 o'clock a.m. Election of officers and other important business to be attended to.

W. A. H. GILSTRAP, Sec.
Caruthers, Calif.

Fresno Co., Calif.—The next quarterly meeting of the Fresno County Bee-Keepers' Association will be held at the City Hall, in Fresno, Calif., Wednesday, June 8, at 1 o'clock p. m. Constitution and By-Laws are to be adopted. Marketing honey and other business is to come up for consideration.

W. A. H. GILSTRAP, Sec.
Caruthers, Calif.

EGGS From pure bred, barred P. Rocks Large and fine plumaged. $1.00 per 15. Also Light Brahmas and Black Langshans, same price. B. P. Rock Cockerels, $1.25.

MRS. L. C. AXTELL,
ROSEVILLE, ILL.

Please mention Bee Journal when writing.

READY TO MAIL

My 40-page Catalog of my Specialties, and **Root's Goods at their prices.** I carry a full line of BEE-KEEPERS' SUPPLIES, and can ship promptly. Catalog Free.

GEO. E. HILTON, Fremont, Mich.

Please mention Bee Journal when writing.

Two Special Offers.

As explained in former ads., publishers can afford to put forth extra efforts in securing *new* subscribers; as the majority remain, once they become subscribers to a *good* journal. It is from this point of view that I make the following offers:

Offer No. 1.

To any one not a subscriber to the Review who will send me $3.00, I will send the Review for 1898 and 1,000 strictly firstclass, snow-white one-piece Sections. After accepting this offer if any one wishes to buy more sections, I will furnish them at the following prices: 1,000, $2.75; 2,000 for $5.25; 3,000 for $7.50; 5,000 for $12 00. Sections will be shipt from any of the following points: Flint, Mich.; Chicago, Ill.; Medina, O.; Jamestown, N.Y.; Higginsville, Mo., or Omaha, Neb.

Offer No. 2.

To any one not a subscriber to the Review who will send me $1.50, I will send the Review one year and a fine, TESTED Italian Queen. Purchasers may have either the bright, golden strain, or the dark leather-colored reared from imported mothers. After accepting this offer, if any one wishes more queens, they will be furnisht at the following prices: Single queen, 90 cts.; 3 for $2.65; 6 for $5.00; 12 or more at 75c each. Orders will be filled in rotation, and safe arrival guaranteed.

Unless otherwise ordered subscriptions will begin with the January issue; and the December, 1897, number will also be sent, free.

If you are not acquainted with the Review, and wish to see it before subscribing, send 10 cents for three late but different issues, and the 10 cents may apply on any subscription sent in during 1898. W. Z. HUTCHINSON.
FLINT, MICH.

Please mention Bee Journal when writing.

Frank B. Barkley Mfg. Co., 835 Old Colony Bldg., Chicago, Ill., will sell you a Feed Cooker direct from the factory.

Talk about
....Comb Foundation

WE can now furnish the very best that can be made from pure wax. **Our New Process of Milling** enables us to surpass the previous efforts of ourselves and others in the manufacture of Comb Foundation.

It is always Pure and Sweet.
It is the kind that does not sag.
It is the kind you want.

If you once try it you will have no other. Samples furnisht **FREE.** Large illustrated Catalog of all kinds of

Bee-Keepers' Supplies,

And a copy of the American Bee-Keeper, sent upon application. Address,

THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

NEW YORK, is the city,
105 Park Place, is the street,
I. J. STRINGHAM, is the man

Who is prepared to ship you, on short notice, **anything** in the apiarian line.

Are YOU the man who wants to buy?

☞ Send for Catalog, anyway.

Please mention Bee Journal when writing.

CARLOADS—

Of Bee-Hives, Sections, Shipping-Cases, Comb Foundation, and **Everything** used in the Bee-Industry.

We want the name and address of every Bee-Keeper in **America.** We supply Dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment.

Write for Catalogs, Quotations, etc.

Inter-State Manufacturing Co.,
HUDSON, St. Croix Co., WIS.

Please mention Bee Journal when writing.

The A. I. Root Co.'s Goods **Wholesale. Retail.**

Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**
Cash for Beeswax. BELL BRANCH, MICH.

Please mention Bee Journal when writing.

I ARISE

TO SAY to the readers of the BEE JOURNAL that **DOOLITTLE** has concluded to sell —BEES and QUEENS— in their season, during 1898, at the following prices:

One Colony of Italians on 9 Gallup frames, in light shipping-box	$6 00
Five Colonies.....	25 00
Ten Colonies......	45 00
1 untested queen.	1 00
6 " queens	5 50
12 " "	10 00
1 tested Queen...	$1 50
3 " Queens.	3 50
1 select tested queen	2 00
3 " " Queens	4 00
Select tested queen, previous season's rearing..	3 00
Extra Selected for breeding, THE VERY BEST..	5 00

About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

—0—

☞ Circular free, giving full particulars regarding the Bees and each class of Queens.

Address
G. M. DOOLITTLE,
1A25t BORODINO, Onon. Co., N. Y.

21st Year **Dadant's Foundation.** 21st Year

Why does it sell so Well?

Because it has always given better satisfaction than any other.
Because **IN 21 YEARS** there have not been any complaints, but thousands of compliments.

We Guarantee Satisfaction.

What more can anybody do? **Beauty, Purity, Firmness, No Sagging, No Loss. PATENT WEED PROCESS SHEETING.**

Send Name for our Catalog, Samples of Foundation and Veil Material. We sell the best VEILS, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

LANGSTROTH ON THE HONEY-BEE, Revised.
The Classic in Bee-Culture—Price, $1.25, by mail.

Foundation and Beeswax Prices Advanced.—We quote an advance of three cents in Foundation, wholesale and retail, on the prices quoted in our Circular. BEESWAX WANTED, at advanced prices also.

CHAS. DADANT & SON,
Please mention the Am. Bee Journal. **HAMILTON, Hancock Co., ILL.**

OUR MOTTO—"Well Manufactured Stock! Quick Shipments!"

SECTIONS, SHIPPING-CASES,
—AND—
BEE-KEEPERS' SUPPLIES.

We make a specialty of making the very best Sections on the market. The **BASSWOOD** in this part of Wisconsin is acknowledged by all to be the best for making **the One-Piece Honey-Sections**—selected, young, and thrifty timber is used.

☞ Write for Illustrated Catalog and Price-List FREE.

MARSHFIELD MFG. CO., Marshfield, Wis.

Please mention the American Bee Journal when writing.

ROOT'S GOODS.

Our Specialties:
- The Fence and Plain Sections.
- Weed New Process Foundation.
- Cowan Extractors.
- Porter Bee-Escapes—the best made.
- Dovetailed Hives—with Danz. Patented Cover and Bottom.
- Danzenbaker Hives.
- No-Drip Shipping-Cases.
- Gleanings in Bee-Culture, Illustrated, Semi-Monthly.

Catalog of Goods and Sample Copy of Gleanings sent for your name on a postal.

THE A. I. ROOT CO.
MEDINA, OHIO.

Branch Offices:
118 Michigan Street, Chicago, Ill.
1024 Mississippi Street, St. Paul, Minn.
1635 W. Genesee St., Syracuse, N. Y.
10 Vine Street, Philadelphia, Pa.
Mechanic Falls, Me.

AMERICAN
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL.
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

Publisht Weekly at 118 Michigan St. George W. York, Editor. $1.00 a Year—Sample Copy Free.

38th Year. CHICAGO, ILL., JUNE 2, 1898. No. 22.

CONTRIBUTED ARTICLES

Mr. D. W. Heise and His Apiary.

I was born on a farm in York county, Ontario, 20 miles north of Toronto, and within three miles of where I now reside, 37 years ago. My parents were of German origin, as the name would readily indicate. As soon as I was able to lend a helping hand, my time up to the age of 16 was spent on the farm summers, and attending a country school in the winter months, which was the extent of my theoretical educational opportunities; but the practical knowledge that I have acquired since leaving school I prize most highly.

The farm work became very monotonous, and out of harmony with my inclinations, having early in life formed a strong desire to learn a trade. So with the consent of my parents, at the age of 16, I adopted the carpenter trade as my choice. After following up this line of work for four years around my native home, I took Horace Greeley's advice and went West. I "pulled up" at Hamlin, Brown Co., Kans., March 19, 1881. Following my trade for two years more, I then, at the age of 22, entered into business on my own responsibility. One year later (1883) I returned to my native country in consequence of having, in a moment of weakness, agreed with a person so to do. By the way, that is now, and has been since 1885, my "other half," as might be expected. And that moment of weakness is one which I have never had the slightest reason to regret.

Apiary of Mr. D. W. Heise, of Ontario, Canada.—Canadian Bee Journal.

At home again, and among friends, and as I thought a fully-equipt wood butcher, it was only a short time until I succeeded in working up a good trade in the building business. For a few years I took in as partner my younger brother, and together we conducted the business until 1891. During a term of eight years there were erected under the direct supervision of myself or brother, about 70 new buildings, including dwellings, barns, stores, school-houses, etc. I now look back with pride upon that record achieved by a stripling.

At the last named date I found the labor too arduous, and the responsibility too great in connection with the above business—for a lazy man; I therefore decided to retire from the same, which I did, and engaged in a general mercantile business.

I first became interested in Apis mellifica, to a very limited extent, when I was about 10 years old. Accompanying my father one late September afternoon to a neighbor's place, we past close along a worm rail-fence which enclosed an isolated pine grove, and in thus passing I observed what turned out to be a swarm of bees, which had settled on the corner of the fence where the rails intersect each other, and about 18 inches from the ground, with the sky for their roof, the grove on one side, and the open plain on the other for their protection. Here they built their comb in such size and quantity that when cut loose they completely filled a large straw hive.

Now for a little of my first experience with bees. But before relating it, I would just like to say I would give several Yankee silver dollars if I could find a swarm similarly situated, just to see how long they could survive in this climate by only placing a roof over them.

Of course, those bees were mine. My father assisted me, or I him, in cutting the combs from the rails, and placing them in the hive. But this was, as I now know, very improperly done. However, the work was completed by fastening small sticks in the bottom of the hive, to hold the combs from falling out. Everything was now ready to receive the large cluster of bees, and the marching in of that vast multitude I can assure you was a few moments of extreme delight to the young enthusiast never to be forgotten. The whole outfit was then carried home and placed in the bee-shed—something which could be found on nearly every farm in those days. But in the majority of cases it was the shed only tenanted with a few empty hives.

My "pets," as I now began to look upon them as being, appeared to make themselves right at home, and I would lie on the greensward in front of the hive and watch the little toilers go in and out about their business. One day, while thus engaged, a man past by, and askt where I got the bees. I forthwith gave him their whole history in detail as far as I knew. And do you know, that wiseacre of a bee-warrior just up and smasht all my air-castles into smithereens, by saying, "They won't winter; you must feed them," etc. But he failed to instruct me how to do the feeding. But not to be outdone, I decided to feed, and for several days a 10-year-old boy could be seen reclining in front of that hive after having placed a few spoonfuls of brown sugar (which he had hookt from his ma) in a saucer at the entrance. Of course, the bees would have none of it, and all petered out before Christmas.

This ended my experience with bees at that time, save a little incident through which myself and brothers learned that bees carry pins in that end which is not generally called the front.

Notwithstanding my misfortune with fence-corner bees, there was a spark of enthusiasm kindled within me which refused to die, and for a number of years my circumstances and surroundings were such as to prevent me from entering the pursuit, yet this spark lived.

In 1888, a venerable and generous old bee-master kindly consented to let me have a colony, which I was to manage on shares. Think of that—a know-nothing managing bees on shares! But I did, and that with profit to its owner. Said colony was the nucleus of my now small apiary, which has never exceeded 38 colonies. I aim to keep the number about 30. On account of limited room, and limited time, also, I am prevented from increasing the number. My experience during those nine years has been varied indeed. I have found myself, as I thought, on the mountain top of success, only to be hurled over the cliff of ignorance into the valley of disappointment. But by reading everything having the name of bee-literature that came before my eyes, my knowledge of the management of bees has increast from year to year, until I am forced to believe I know at least a little more of their habits than when I tried to feed them brown sugar.

Now, Mr. Editor, I am not nearly run down, but lest some Yankee should run me down unless I stop this nonsense, I beg to conclude by saying that the hight of my ambition, for which I have striven, has been fully realized the past season, namely: An average surplus of 100 pounds of extracted honey per colony, spring count.

I trust that this bit of personal history may interest at least some of the readers of the American Bee Journal, as I have been interested in reading the biographical sketches of others. D. W. HEISE.

Ontario, Canada.

Rendering Beeswax with the Sun Extractor.

BY C. P. DADANT.

The following questions have been sent to me for answer in the American Bee Journal:

"Will you please tell us what is the matter with our wax, which has been rendered by the solar wax-extractor three different times? We send a sample cut from a cake, the dark part of which gets darker as it nears the center of the cake, and also deeper. How can we get it all bright yellow? and would it be any advantage when next melting to raise the temperature of the extractor to about 140 or 150 degrees before placing the old combs in, and then allowing the melted wax to run into a pan that contained water of about the same temperature?—ALDER BROS."

The solar extractor is very efficient to render up combs, especially new combs or cappings, into beeswax, as it is always at hand during the busiest season, but it is absolutely useless in purifying beeswax that has been rendered.

The sample sent with this enquiry is very clear in a portion of it, and darkish and opaque in another portion. This is not astouishing. When you put combs into the solar extractor, those parts which contain the most beeswax will be the first to soften, and therefore the purest beeswax will run first; when the bulk of it has melted down, the remaining liquid part comes also, with a portion of the dregs mixt into it. The cake is thus made to look darker at its center or at the portion which has last melted down.

It would be of but little use to melt up this beeswax several times in succession in the solar extractor, for these dregs are very fine and are sure to stay with the wax. The only method to purify the wax further is to melt it with water, allowing it to cool as slowly as possible. It must be brought to about the boiling-point of water so that there will be a perfect freedom for all the particles of dirt to settle, and as they are usually heavier than beeswax, the dirty portion will be found to have settled to the lower edge of the cake, from whence it may be scraped without difficulty. Several successive meltings with the sun extractor would only tend to mix the dregs more thoroughly with the beeswax and render it so much more difficult to cleanse. The sun, however, has the faculty of bleaching the wax, and would thus render it of brighter color. But even in this there is an extreme to be avoided. Beeswax that has been thoroughly bleacht loses its pleasant smell and assumes the disagreeable smell of candles.

The reader will thus see that altho the sun extractor is very good, in fact better than the water process in many instances, yet it is not sufficient if a prime article is wanted, thoroughly purified, for commercial uses or for exhibit. But for comb-foundation making the wax may be shipt to the manufacturer without further trouble, as it is more readily and more easily cleansed of these light remaining impurities in large lots than in small parcels.

Very old combs will decidedly not do for the sun extractor. We have again tried them with negative results, for too much of the wax becomes soakt into the residue. The only paying method of melting old combs is by the water process given by me in the last article on this subject.

While I am on this question, I wish to cite a suggestion made to me lately by one of our friends—J. S. Willard, of Iowa—to put old, broken combs and scraps into a sack which may be sunk into a kettle of water so as to let the wax rise at the top. I have never tried this process, but it looks reasonably practical.

And, by the way, I was told once by a practical candlemaker, and have always thought and held without actual trial, that hard water was injurious to beeswax in the rendering, and that to the use of this hard water could be ascribed some of the spoiled beeswax that is made. But I must to-day acknowledge my error unless the conditions depend on the proportion of mineral in the water, for here is the reply I had from a man who always sends us the very nicest beeswax—Mr. Staininger, of Iowa—and of whom I askt his methods:

"In regard to the wax, I always take hard water and melt it from two to three times, according to the wax; use plenty of water and melt it till the water comes off clean; have a new tin can and *don't get it too hot.*" (Italics are mine.)

Now, here is another testimonial: Messrs. Tood & Arnold always have the very finest beeswax. This spring they sent us a small lot that lookt dark and gray. We askt them what was the matter with it. Here is the answer:

"When the cappings were washt they were put into an iron kettle for a few days before melting. That was the first time we ever had a bad lot, and we want it to be the last."

Here is another: Mr. F., of Babylon, Ill., sent us the ugliest cake of water-damaged, blackish beeswax that we had ever seen. The cake is so abominably ugly and looks so little like beeswax that we are preserving it for exhibit as an object lesson. We askt this party about it, and stated that it was our opinion that it had been overboiled and rendered in iron. The answer is as follows:

"Probably you are right about the boiling of that beeswax, as it was boiled quite awhile in an iron kettle."

Now whether hard water has anything to do with it, as was held by the candle-maker, or whether some kinds of hard water have an effect on it, there is no doubt that to make good beeswax it must be treated as follows:

1. If rendered in the sun melt once, and afterwards either render it with water or let it alone.
2. If rendered with water it is probably best to use soft water, but it must be boiled slowly with plenty of water.
3. A tin, or tinned, vessel must be used. We use copper,

which is all right if kept clean. Iron *may* do if once *coated with wax and kept from rusting.*

4. The wax must be allowed to cool as slowly as possible, and must not be overboiled.

5. If very clean beeswax is wanted, it should be rendered till the water comes off clear.

6. Damaged beeswax can only be returned by sun heat, and must then be purified again.

While we are on this subject we might as well give it a thorough examination, and if any of the readers desire to make further enquiries they will be welcome

Hancock Co., Ill.

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First Day of Spring Among Out-Apiaries.

BY HARRY S. HOWE.

On the morning of March 15, Mr. W. L. Coggshall and myself were discussing "bee-prospects" by the door of his shop, when I remarkt: "The unusually early spring has started the season for out-door work with the bees from two to three weeks ahead in this locality."

"Yes," said he; "and those south yards should be seen soon."

"But the bottom has dropt out of the roads, almost."

"That is so; but there is no immediate prospects of their being any better, so if you want to take Topsy and the old buggy, go ahead. You can see your own south yards, too, while you are at it."

D. W. Heise.

"All right."

Getting out a bee-veil I started over the worst possible kind of roads—roads which are a disgrace to the boasted civilization of the State of New York.

Mr. Coggshall has no home yard, the nearest one being about one-third of a mile from home. This one, however, had been visited, so the first stop was at the Brown yard, seven miles south and east. Here are 50 colonies all alive.

The first work is to see that all of the hives that may have become tilted during the winter are properly leveled up. Next, the alighting-boards are put in place. This is very important at this time. There would be two or three times as many dead bees in front of the hives where the boards had got displaced as there would be in front of those having the boards in place. One good way of fastening them in place is to drive two staples in the entrance block and then hook two more through them. These are then driven into the end of the alighting-boards, the other end of which is allowed to rest on the ground.

The Brown yard is all in single-story Eclectic chaff hives, with old style Hoffman closed-end frames. This yard has given the smallest average loss since it was establisht of any of the yards.

The next yard south is Etna, where there are 60 colonies, all alive. About half are in two-story chaff hives, the rest in Coggshall's big packing boxes.

The work of cleaning out the entrances with a crooked wire, and then shutting them down to about 1½ inches was repeated. Each colony that did not clearly show its condition from the entrance was lookt into and its condition noted. This yard was rather shorter in stores than any of the rest. Many of them had eaten the honey away from the top-bars, leaving that below. They seemed to have more brood than was good for them at this time of year.

There is another of Mr. C.'s yards at Ellis, five miles south yet, but it is over such a big hill, and the roads are so bad, that it has to be skipt for the present. This can be done the more safely, as they are all in packing boxes, and do not have to have their entrances contracted.

Turning to the west the Varna yard of 120 colonies, all alive, comes next. This is the yard that the editor of Gleanings took such a fancy to, when he was out here last summer.

Next in order is Forest Home, where all were alive a few days ago, so no stop is made.

Passing through Ithaca, the mile of smooth brick pavement made Topsy forget the 18 miles of mud she had waded through to get there. The Ithaca yard is just west of the city, where there are 107 colonies, still all alive. On the way back from this yard to Ithaca, where I put up for the night, I found a few blossoms of trailing arbutus.

The next two days see the same story repeated, with only slight changes caused by local conditions at the different yards, until 700 colonies with a loss of two is the record so far. There are several hundred colonies yet to see before the records are all in, but from the sample we can judge the balance.

"But the end is not yet."

The bees have more brood and less honey than I ever remember to have seen on the first trip in spring. This leads me to take rather a pessimistic view of the future. We can winter bees all right, but to "spring" them—there is the rub. It looks now as if we should have to feed to get through the spring, at least in some of the yards.

Usually we have the honey from the winter loss to brace up the light ones. Those that go out from now on will not have enough honey to do much good.

If the weather should turn very cold in April we would be almost sure to have a heavy spring loss.

Tompkins Co., N. Y., March 20.

[Accompanying Mr. Howe's article came this paragraph by Mr. Coggshall himself, dated May 14:—EDITOR.]

I have just finisht looking over the out-apiaries, and I find 7 per cent. dead. The balance are in fair condition. I expect to lose 5 per cent. from old queens, as I do not requeen. When I had only 300 or 400 colonies, and lookt after them alone, I requeened every two years and clipt the queens. I do not know but it would pay to put on extra help and requeen.

W. L. COGGSHALL.

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Can Bees Hear?—How Sound Affects Them.

BY F. C. KENYON, PH. D.

On page 197, in the report of the meeting of the Northwestern Bee-Keepers' Association, I note a question and a few remarks on the subject of the hearing powers of bees. Anyone who has handled bees and heard the different tones made by their wings, the angry buzz, the calling buzz when one lifts off the hive-cover, and noted the action of other bees must, it would seem, come to the conclusion that in some way or other they are affected by sound—and that is the essential part of hearing. That they have no visible organs of hearing similar, or rather like those found at the base of the abdomen of locusts, or on the legs of certain grasshoppers, is certainly true, and that is doubtless what Mr. Bruner meant that he had not been able to find.

The fact is, however, that probably most, if not all, insects hear; that is, are affected by sound or air waves; and as in all animals the nervous system takes part in the hearing. Various beetles make a squeaking noise by rubbing the abdomen and thorax together. The cricket chirps by rubbing its wings; some of the thousand-legged animals or millipedes have certain modified legs the rasping of which one on the other produces a noise. Some South African spiders have jaws and palpi so modified that sounds can be produced. In most of these cases the power of producing sounds appears to have the effect of letting other insects know of the whereabouts of the one making the sound. Even the mosquito apparently hears, and an organ has been discovered in the lower surface of the abdomen of the ordinary bedbug that, judging from its structure, must have something to do with making a noise. Why not for the purpose of letting other bedbugs hear?

In the case of the mosquito hearing seems to be by means of the antennæ. These, as every one who will take the trouble to examine may see, are delicate structures which in the male are covered with fine hairs—feathered would be a better expression—and are affected by every little wave of air. Not many years ago a certain scientist succeeded in cutting the head and antennæ of mosquitoes, and a large number of other kinds of insects, into fine slices so that they could be more easily studied by observation through a microscope. He was able to make out the nerves and the nerve-fibers running from the brain into the antennæ and connecting with the bases of bristle-like and hair-like structures on the joints of the antennæ. Some of these structures were found to be situated on the top of the joints of the antennæ nearest the head, so that when the joint in front moved its base would strike against the tips of the structures. This would be equivalent to a touch, and would be carried through the nerve fiber to the brain.

As all of our higher senses—hearing, sight, taste, and smell—are really nothing more than a highly developt or modified sense of touch, there is little reason for not calling these hair-like organs of the mosquito's antennæ, organs of hearing. Organs very similar to them were found in greater or less abundance in nearly all the insects studied by the scientist, even in those having what have been called organs of hearing on the abdomen. They were found in insects closely related to the honey-bee, and there seems therefore good reason to believe that any person properly trained in the methods of using the microscope would be able to find similar structures in the bee's antennæ. District of Columbia.

Bees in Relation to Flowers and Fruits.

BY THOS. WM. COWAN.

(Delivered at the University Farmers' Institute at Pacific Grove, Calif.)

Most of us know that bees gather both pollen and nectar from blossoms, but it is not generally known why the wants of bees are supplied by the floral world. The answer to this question reveals to us a new meaning to the existence of these insects. Plants blossom in order that seed may be produced and perfected, and the race continued. Before the seed can be produced, pollen borne by anthers must be placed on a certain special part called the stigma. Should the pollen be of a suitable kind, and the stigma in a receptive condition, a delicate thread called a pollen-tube is thrown out by the pollen granule into the seed-vessel, by which the seed becomes fertilized, and, when mature, capable of germination.

Let us examine a flower and bear in mind the arrangement of the different parts. The calyx is the outer green cup, the cover of the bud, and expands as the flower opens, showing its sepals. In some flowers, as in the fuchsia and larkspur, the calyx is colored. Then we see the corrolla made up of petals. This is the most ornamental and conspicuous part of the flower.

Just within the corolla are situated the reproductive organs. They consist of stamens and a pistil. The stamens are slender filaments surmounted by a pouch bearing pollen, and these are the male organs, while the pistil in the center is the female organ of the flower. This consists of an ovary containing the ovules or undevelopt seeds, and one or more thread-like styles arising from it, and each terminating with a fleshy stigma. The great majority of flowers possess both anthers and stigmas, thus carrying the two sexes within themselves. From this we might suppose that the form of the flower would be such as to secure the transmission of its pollen to the stigma in order that the end of its being may be accomplisht. The older scientists thought so, and were puzzled to explain the various forms of blossoms they examined.

Very vague ideas prevailed as to how the pollen was carried to the stigmas. It was at first thought that the pollen simply fell on the pistil; but when it was found that in some cases the stamens and pistils were on separate plants, the question arose, How could the pollen be transferred at such great distances? It was only toward the close of the last century that Sprengel, after devoting a long time to patient investigation, came to the conclusion that the structure of a large number of blossoms was such as to prevent the flower being fertilized by its own pollen. Very little attention was paid to this until within the last half century, when the researches of Hildebrand, Delpino, Hermann Muller, and, above all, Charles Darwin, threw new light upon the matter. We now know that conspicuous flowers, generally speaking, are especially arranged to prevent, or at any rate impede, fertilization by pollen which they themselves produce, while marvelous contrivances are found to secure pollen from some other plant or flower of the same species. Among those that have been studied there are a few apparent exceptions, but these under renewed examination are frequently revealing unsuspected adaptations to cross-fertilization. The protest made by nature against continuous in-breeding applies no less to plants than to animals, to flowers as well as bees. But as blossoms are fixt, and incapable of locomotion, it may askt, How is the fertilizing dust carried from one plant to another?

INSECT AGENCY.—In some instances it is carried by the wind, and such plants are called *anemophilous.* Among them we find Indian corn, wheat, barley, grasses, hazels, pines and others. Anemophilous plants, as a rule, bear inconspicuous flowers. In the Indian corn the sexes are produced on different parts of the plant. The pistils are the threads projecting from the ear, while the stamens are the tassels at the top. Such plants produce a very large quantity of pollen so as to insure each blossom having a sufficient number of granules to secure fertilization. But Sprengel was able to show that by far the larger number of flowering plants confide to insects the duty of bringing about those unions which, without them, would never be effected. The whole family of *apidæ* among insects is found to be most useful for this purpose, and of these *Apis mellifica*—our common honey-bee—stands out *par excellence* as the complement of the blossom. It has been shown that in the spring, when fruit-trees are generally in bloom, there are 20 bees flying and visiting the flowers to one of any other kind of insect.

As insects are necessary to the existence of most plants, the flower secures their visits by offering them pollen and nectar served in the most attractive fashion. Pollen is necessary for the flowers themselves, but it is produced in such profusion that there is more than enough for their purpose, some of the surplus going toward the flesh-forming food of the bee. Nectar, however, in most cases, is yielded solely for the benefit of the bee, and is the reward for her work. We thus see that insects perpetuate flowering plants and flowers continue the existence of insects, both being vitally dependent upon each other. The main function of the highly decorative corolla is to attract insects, but the anthers and stigma are absolutely necessary to secure the reproduction of the plant.

CHARACTER OF POLLEN.—Pollen contained in the anthers of various flowers differs greatly in form, color and size. In wind-fertilized flowers it is dry, but in *entomophilous* or insect-fertilized plants the granules are coated with an oily substance which gives them adhesiveness, and enables them to stick to the body of the bee. The stigma, when ripe or in a receptive condition, has a moist surface. When a pollen-grain comes in contact with this, it receives nourishment and the exterior coat bursts, while the interior protrudes and develops a tube which passes through the pistil with remarkable rapidity into the cavity of the ovary, sometimes to great distances, as in the crocus, in which the style is frequently five or six inches long. The pollen-tube enters the ovule by an opening called a micropyle, which it has unerringly found in the darkness. Every ovule requires a pollen-tube to fertilize it, but usually many more are produced than can be utilized.

(Continued next week.)

Does Bee-Keeping Pay?—A 17-Years' Report.

BY WM. STOLLEY.

On page 33 Mr. C. P. Dadant has a very interesting article, showing the outcome for one year in an apiary of 80 colonies, managed by expert bee-keepers, such as the Messrs. Dadants are. It may interest some "farmer bee-keepers" how bee-keeping paid me in 17 years, since I did not know anything at all about bees when I began, but being an enthusiast I no doubt spent a great deal more work on my bees than probably really was required until years of experience taught me better. And yet, I see that while Mr. Dadant figures on but 19¼ days work with 80 colonies of bees during the entire season, I workt in all about 28 days with only 28 colonies, spring count, in 1897, and I had a boy to help me at times, besides, when my heavy hives had to be lifted.

I have kept a very accurate account of all money expended, as well as of the money realized out of bee-keeping in the 17 years. Before I present my statement, I will say that I figure all my surplus honey secured at 15 cents per pound, including what of it was consumed in our household, for that is the price I sell for, and for years I sold all I had at even 25 cents per pound. I have, and aim to keep, my customers who will buy only from me, knowing that they will get the pure and unadulterated article, and they are willing to pay me a fair price for my honey. Thus I care little at what prices Chicago, St. Louis, Kansas City or Omaha commission men quote honey, and I have even a customer in St. Louis as well as in Kansas City, who pay me 15 cents per pound for extracted honey, and order annually.

In the summer of 1880 I began with but two colonies of bees, which by swarming increast to six colonies. By proper feeding, and guarded by the advice obtained from the columns of the "old reliable" American Bee Journal, I was fortunate enough to winter them well, altho for 105 days in one stretch they had no flight.

Now, the following is a correct statement for each year succeeding—1st, of the number of colonies, spring count; 2nd, the surplus honey taken; and 3rd, the average per colony secured:

YEAR.	No. Colonies in Spring.	No. Pounds Surplus Extracted.	Average No Lbs. Per Colony.
1881	6	230	38
1882	14	314	22½
1883	25	320	13
1884	48	80	1⅔
1885	32	256	8
1886	23	2,635	.114½
1887	23	2,078	90¼
1888	21	1,474	70 1/5
1889	27	2,036	75½
1890	26	1,175	45 1/5
1891	18	2,358	131
1892	31	1,038	33½
1893	32	885	27⅔
1894	23	50	2
1895	17	3,002	176⅓
1896	26	3,010	116
1897	28	1,570	56

The next table shows the amounts realized, as well as the annual disbursements, from 1880 to Jan. 1, 1898:

YEARS.	Receipts.	Disbursements.
From 1880 to Jan. 1, 1884 (in three seasons)	$331.50	$468.18
1884	79.00	67.58
1885	294.50	50 80
1886	550.00	35.05
1887	422.33	20 55
1888	248.25	38.75
1889	391.65	56 80
1890	174.55	28.00
1891	360.37	30.70
1892	203.65	
1893	256.40	63 35
1894	67.55	25.75
1895	465.25	24 61
1896	548.50	35.50
1897	319.70	44.75
Total	$4,713.20	$990.37

The amount realized over and above expenses is $3,722.-83, which gives me an average income of about $213 per year for my work and investment. Bees are, of course, a side-issue with me, but they are also a hobby, and I see, first of all, that they are well supplied for winter before I take a pound of honey away from them. I never extract from the brood-chamber, altho one-half of my standard hives carry 14 frames 11½x11½, and the rest 10 to 11 frames of the same size.

During the 17 years I have sold 68 colonies of bees at a total of $690, and besides 74 empty hives at different prices, according to the quality of the hive sold.

I do not pretend to deal in apiarian supplies, but was somewhat compelled to have some extra hives and foundation on hand for those who bought bees from me.

At the present I have a little, but model, apiary of 36 colonies, in a well-built bee-shed of 90 feet in length, together with all appliances needed. Of course, if I would keep hundreds of colonies in several separate apiaries my mode of management would not answer. But the particular pains and care which I take with each colony is the very pleasure I get out of it, and that is in the first place the very thing I am after in keeping bees.

As I have said, I often have a boy to assist me when needed, and nearly always work with the bees in the afternoon so as to take advantage of the shade.

I think that bee-keeping on a small scale pays me in proportion to the capital invested as well as anything else on the farm.

If a person is not adapted to bee-keeping—if he has not a genuine love for his pets, and the business—such a person would much rather let fooling with bees severely alone. That is my unqualified opinion about keeping bees.

Hall Co., Nebr.

CONVENTION PROCEEDINGS

Report of the Ontario Convention.

Being the 18th Annual, Held at Hamilton, Dec. 7-9, 1897.

Mr. J. K. Darling delivered the following:

President's Annual Address.

Another season has past by, and we are again met together to compare results and lay plans for the future. The past season has been a varied one, the bee-keepers in some localities securing a fairly good yield of first-class honey, while in others there was very little, and in some places none whatever of a first-class article stored by the little workers. In some sections there was a small flow of dark honey in the fall, and in others the bees secured barely enough for winter stores, and a goodly number of colonies have had to be fed. As a consequence prices are firm, and the surplus of last year is likely to disappear before another season opens.

As an Association we can congratulate ourselves on making progress. Some years this advance is not as pronounced as at other times, yet "Onward" is the word, and we are living fairly up to it. If we take a statement made by the President of the Dairyman's Association of Eastern Ontario at their annual meeting, held in Brockville last January, and compare our work with theirs, we will have no cause to feel disheartened. After referring to the vast amount of butter and cheese which Ontario exports to England, he says:

"Now, how has this been brought about? In the first place, by organizing a dairyman's convention at Ingersoll 30 years ago this spring, with the motto of 'Progress.' For the first 14 years all that the association did was to hold conventions, to teach cheese and butter making while attending and holding of cheese shows."

Surely, our record is as good as that, and while we cannot hope to accomplish as much as the dairymen can accomplish, or to increase the industry of bee-keeping to the magnitude of the butter and cheese trade, there is plenty of room for advancement. The work of the association must be mainly along the line of education, and I think we ought to begin at once to push that branch of our work with more vigor than we have ever done in the past. It is that kind of work that has placed the dairy interest of the Dominion in the front rank as it stands to-day.

ADULTERATED HONEY SCARCE.

There have been no complaints of adulteration during the past year, owing, no doubt, to the efficient work done in the Inland Revenue Department at Ottawa; and it is my opinion that with the law as it is now, and a proper watchfulness on the part of honey-producers, we will not have much trouble with adulterated honey. It is a matter upon which we can congratulate ourselves that not one of the adulterated samples was traced to a bee-keeper, and that most of the samples which were adulterated with glucose were traced directly or indirectly to one firm in Montreal; and, further, that the most of the adulterated samples secured were secured within a radius of that city. This is a matter that ought to be proclaimed from one end of the Dominion to the other, thus allaying the distrust that has arisen regarding pure honey. Only one sample in 15, and that in a limited area.

Regarding the standard for the specific gravity of honey, we are very much at a loss as yet how to proceed. The fact that the percentage of water in the samples analyzed at Ottawa ranged all the way from 12 to 33 per cent. would show at once that much more must be done before any definite conclusion can be reached. This work we now have before us. The educating of the masses in regard to the use of honey, thereby increasing our home market, is a matter deserving the attention of this Association quite as much as teaching those who wish to keep bees how to care for them. The program which is placed before you will provide an opportunity for each one present to contribute something to our store of bee-knowledge. I hope that the friends who lookt forward after last year's meeting with the expectation that our meetings in the future would be less turbulent and more harmonious and useful, will not be disappointed.

I thank you for the confidence placed in me a year ago in elevating me to the position I now occupy, and I trust you will assist me in making these meetings both pleasant and useful during the few hours I shall remain in my present position.

J. K. Darling.

Referring to the minutes and the President's address, Mr. Holtermann stated that there was too much unripe honey placed upon the market, and that we should take steps to have a limit fixt as to the percentage of water honey should contain when placed before the public. In the discussion following attention was drawn to the difficulty of fixing a proper standard, and to the fact that the breed of bees, locality and season had much to do with the thickness of honey. Prof. Shutt, analyst from the Dominion Experimental Farm, referred to the English standard of 18 to 20 per cent., and that there are cases where the percentage far exceeds 25 per cent., but he considered the Association safe in putting it at 25 per cent.

Upon motion it was decided that this Association appoint one or more of its members, and that the Department at Ottawa, the Dominion Experimental Farm, and the Ontario Agricultural College at Guelph be requested each to appoint a man, and that this committee secure samples of honey capt in the hive, and find the percentage of water contained therein, and report at our next annual meeting.

Management of Bees in the Spring.—Mr. J. W. Sparling gave a paper on this subject. He emphasized the importance of commencing spring management in reality the fall previous. The first care is abundance of stores, and too much importance cannot be attacht to young, vigorous queens. He advocated early putting out, no spring packing, and if stimulative feeding be practiced, that it only be done during the honey-dearth between fruit-bloom and clover. Mr. Alpaugh spoke of the desirability of early fall packing, and also stated that comparatively small colonies of young bees were preferable to large colonies of old ones.

Prof. Shutt gave the results of three years' experiments with foundation of various weights. The results pointed toward the use of heavy foundation, the bees seeming to add less wax when drawing out the foundation, thus making more use of what was given them.

A considerable discussion took place as to the desirability of opening up the British market for Canadian honey. It was stated that the clover honey from Canada was of a better quality than that from Australia and other foreign countries. The British market does not demand minty honey, hence it is a mistake to send basswood honey there. Nothing but the best clover should be sent to Britain, and many thought that we could not expect to realize over 7 to 8 cents net for it.

Outline of Work During the Extracting Season.—Mr. Newton, in dealing with this subject, stated that he produces both comb and extracted honey. He selects his best colonies to work for comb honey, and the remainder for extracted. He uses queen-excluders and full-depth supers. When the first super he puts on is about two-thirds filled, he raises it up and puts an empty one beneath it and on top of the honey-board. Be sure the honey is well ripened before extracting, and have combs capt over before removing from the hive. He recommended being scrupulously clean and tidy while extracting. He renders cappings each day with a solar wax-extractor. At the close of the season he has the extracting-combs piled on the hives and cleaned by the bees before being put away. In the discussion following, the fact was brought out that the honey obtained from cappings when being rendered into wax by a solar wax-extractor would not be colored by the heat if the pan into which it runs were shaded; it was also necessary to keep the extractor clean if the honey was not to be colored by sediment or other matter in it. It was contended that it was a loss of time to the bees to give them extracting-combs during the day; they should be given in the evening, and they then will have the night to clean them up.

"The Production of Comb Honey" was introduced in a short, comprehensive paper by Mr. J. B. Hall. He stated as a first requisite a right strain of bees, those that will fill the brood-chamber with brood, and not refuse to work in the sections when the time comes. He did not believe the hive had much to do with the securing of a large and nice crop of comb honey. He emphasized the necessity of seeing in September that bees had abundance of stores to last them until honey came again. He strongly urged the *filling* of sections with foundation, and not to use that which is tough. The apiarist must know about the time his honey-flow begins and ends, and give supers as soon as needed, and keep a little ahead of the bees, and remove the honey just as soon as it is capt.

Mr. W. M. Orr being present at one of the sessions, he was askt to address the Association. He stated that during the past year not a single sample of adulterated honey was traceable to a bee-keeper. Concerning spraying, he asserted that it was not only useless to do so while fruit-trees were in bloom, but absolutely injurious. He showed samples of the San Jose scale on both fruit and wood, and much interest was shown in the examination of these specimens. In speaking of it he stated that bee-keepers were interested in it as well as fruit-growers, inasmuch as the scale would attack any variety of tree except pine and cedar.

"What is your experience with Carniolan bees?" was askt. Mr. C. W. Post exprest himself as well pleased with them, but the majority of those present did not agree concerning their various qualities. In answer to other questions askt, it was thought advisable to have an opening through the center of the brood-combs in order to allow the cluster of bees to contract and expand during cold weather. In producing comb honey it was thought best to fill the sections with foundation, as it not only gave a better quality of honey, but far more of it. About 70 to 85 per cent. as much comb honey, it was thought, could be produced as extracted. A majority of those present advised the clipping of queens in order to control swarms.

Again referring to the subject of a British market for Canadian honey, it was moved by W. Couse, seconded by F. A. Gemmill, and carried, that we heartily endorse the action of the Government in placing a commissioner in London to look after the interests of Canadian products, and that we request honey to be placed on the list, and that we would recommend to the Government Mr. C. W. Post as an inspector to guarantee any honey which we may export.

Upon motion, Mr. J. Newton was recommended to the Government as a fit and proper person for Dominion apiarist.

Officers Elected:—President, M. B. Holmes; 1st Vice-President, W. S. Brown; 2nd Vice-President, J. D. Evans; Secretary, W. Couse, Streetsville; Treasurer, M. Emigh. Directors, J. K. Darling, C. W. Post, J. W. Sparling, A. Pickett, Jas. Armstrong, J. Newton, F. A. Gemmill, W. A. Chrysler, and A. Wood; Representative to the Ontario Agricultural College, R. F. Holtermann; Inspector of Apiaries, Wm. McEvoy; Sub-Inspector of Apiaries, F. A. Gemmill; Representatives to the Boards of Management of the Industrial Exhibition, Toronto, A. Pickett; London Fair, R. H. Smith; Central Fair, Ottawa, J. K. Darling; Auditors, A. E. Hoshal and Jacob Alpaugh; Revising Committee, J. D. Evans and D. W. Heise.

Guelph was selected as the next place for holding the annual convention.—Farmer's Advocate.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

What Was the Matter?

1. I had a swarm of bees last summer settle in a tree over a large creek. I had the tree cut and drowned a great many bees, but succeeded in saving the queen. They workt nicely all summer, but in the fall got weaker. I examined them and found they had not an egg or young bee. They had a nice lot of honey and a beautiful, large Italian queen, but she died with the bees, leaving what honey they had.

2. Also, another colony, very rich, swarmed out in January, leaving a full hive of honey. What was the cause?

3. Also, another had plenty, with a large brood-chamber, kept coming out and going off, leaving the queen crawling on

the ground, then would return to the hive in search of the queen. What was the cause? NORTH CAROLINA.

ANSWERS.—1. There may have been some defect in the queen, or the trouble may have been merely weakness of the colony.

2-3. I don't believe I know, unless too weak in bees.

Telling Carniolans from Blacks.

By what particular marks can I tell the Carniolan bees from the common bees generally known as "blacks?" ALABAMA.

ANSWER.—Rather hard to describe, but perhaps it may be said that in the Carniolans there is a light or whitish band that does not appear in the blacks.

Brood-Frames Partly Filled with Comb.

1. I'm a beginner and have at present six colonies, and the bees seem to be in good condition at present. I placed the supers filled with sections on all of them May 14. I examined all of the hives and found the frames with comb, but no honey in them excepting in one. Is this all right?

2. In regard to this one I wish the information. On opening the hive I found the frames partly filled with comb. To give you an idea you can see by the rough drawing I herewith send you. What is the cause of this? One comb has brood partly capt. NEW JERSEY.

ANSWERS.—1. It is hardly wise to put on supers before the bees are ready for them. In your locality they are not likely to store any surplus before clover, and even then they would hardly store in sections until the brood-frames were well filled.

2. The peculiarity in the case seems to be that the frames are very irregularly filled, all being only partially filled, and no two combs being alike in size or shape. It hardly seems that bees, left to their own devices, would ever build combs in this way. It may be that the combs were put together from different hives, or it may be that the combs were wormy or otherwise bad, so that the bees gnawed away the faulty part, leaving them in this irregular condition. Of course only a guess can be made, and this guess may be entirely wrong. You will find nothing about such a case in the books, as no such case would ever occur under ordinary circumstances—only as an accidental thing.

Laying Workers and Foul Brood.

1. I have a colony that I found queenless in the spring, but found some drone-brood, and what I thought a queen-cell. I let it alone for two weeks and found no queen. I gave them two frames of brood and eggs, and they paid no attention to queen-rearing, but still found drone-brood. Then I gave them one more frame of brood and eggs, and in a week I found two queen-cells. Now, it has been 22 days since I gave them the last frame, and no queen yet, but a little drone-brood. Have they a laying worker and don't want anything better, or what is the matter?

2. I have a colony that I suspect has foul brood. In the spring of 1897 I found it weak. I gave it a frame of brood and discovered some dead brood, and they did not build up strong in the summer. I gave them two more frames of brood and they seemed to build up and clean out the hive nicely, and were in very good condition by fall, but I never put on a super at all. This spring I thought they were in good condition, but they do not get strong, and I find the brood scattering—eggs, brood, larvæ, and dead brood all mixt up. The dead turns brown but does not get ropy or smell offensive. This evening I set the queenless hive by the other, and in a few days I aim to double them up and put them into the queenless hive, and do away with the other. What do you think of that?

3. I also have a third colony that is strong, but I find some dead brood, and the brood scattering, but no bad odor. KENTUCKY.

ANSWERS.—1. The probability is that they have not only a laying worker, but a whole lot of them. Better break up the whole business and give the combs to another colony or divide them among several.

2. I stopt and studied over this question some time, then turned to Mr. Cowan, editor of the British Bee Journal (who was at my house at the time, and who knows ten times as much about foul brood as I do,) and askt him what he thought. He thought it might be a pretty safe thing to destroy the suspected colony, as the risk was so great. Occasionally it happens that the disagreeable smell is not observed. The presence of dead brood scattered among the living is very suspicious. Turn back to page 289 of the American Bee Journal, and study the picture taken from a photograph by Mr. Cowan. Burn frames and combs, but the hive may be saved. Mr. Cowan's pamphlet says:

"The hive is disenfected by being either steamed or scrubbed with boiling water and soap, and then painted over with a solution of carbolic acid (one part of Calvert's No. 5 carbolic acid to two parts water,) and when the smell has disappeared it will be ready for use."

3. The dead brood scattered among the living looks very suspicious, and suggests close watching, at least.

Hives in Which Bees Died—Uniting Second Swarms.

1. Last year three of my colonies died, and this spring I put one of the hives on top of another hive of live bees, thinking they should get out the honey that was left in them, but instead of taking the honey out they carried some more in it, and besides they had two combs filled with brood, and a good many of the cells were filled with pollen. What is best to be done with the matter?

2. Can I put second swarms together without taking one queen away?

3. I have two hives with honey in them which I put on top of other hives so that the bees can get the honey out, but they are very slow at it. Can I leave them stand that way till after swarming-time? ILLINOIS.

ANSWERS.—1. The result would probably have been different if you had put the empty hive under instead of over. However, nothing very bad has happened. You can at any time take away the combs that are unoccupied and mass in one hive the combs of brood. If more than will go in one story and you don't want to have more than one story filled, it will be an easy matter to give such combs to colonies needing them, to nuclei, or to swarms.

2. Yes, if they are united at or near the time of swarming. A few days later it may be well to make one of them queenless 24 hours or more before uniting.

3. Better put them under, and it will be safe to leave them till wanted for swarms, or till later.

Drones in Fruit-Bloom, Swarming, After-Swarms, Putting on Sections.

1. Is it anything uncommon to have sealed drones in the hives at this time of the year (May 20)? I have seen one live drone, too. It is fruit-bloom just now.

2. How soon can a swarm be expected from now? The colonies with drones are very strong and have plenty of sealed workers.

3. Please give me a plan or plans (if you know several give two or three of the best) that you will warrant to prevent all after-swarms. I have only one empty hive for every colony of bees.

4. When is the best time to put on sections, and what are the signs? I mean, of white clover, if when I see the first blossom, some of the bees are whiting the top edges of the comb? IOWA.

ANSWERS.—1. No. On the other hand it is rather unusual that you can find only one live drone in fruit-bloom.

2. Hard to say. Depends somewhat on the weather. If favorable, a strong colony might swarm in fruit-bloom, but not many colonies are likely to swarm till fruit-bloom is over and white clover has commenced to yield.

3. If you cut out all queen-cells but one, being sure to miss none, it's pretty safe to warrant there will be no after-swarms, but it's pretty safe to warrant that if you treat many in this way you'll occasionally miss a cell. Perhaps the best thing for you to do is to take this plan: When a swarm issues, set the hive with the swarm on the old stand, putting the old hive close beside it. A week later carry the old hive to a new place a rod or so away. The field-bees will return to the swarm, the parent colony will be reduced in numbers, and all supernumerary queens be destroyed.

4. You can't go by date. Go by conditions. Generally when you see bits of white wax put on the upper parts of the comb, it is time to put on sections. But hardly when this occurs in fruit-bloom. In Iowa, when the very first white clover blossom is seen, you may expect bees to be working pretty well on white clover, so if you are observing enough to note when the first lone white clover blossom appears, you may be ready to put on supers in about 10 days.

AMERICAN
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

EXECUTIVE COMMITTEE—Pres., George W. York; Vice-Pres., W. Z. Hutchinson; Secretary, Dr. A. B. Mason, Station B, Toledo, Ohio.

BOARD OF DIRECTORS—E. R. Root; E. Whitcomb; E. T. Abbott; C. P. Dadant; W. Z. Hutchinson; Dr. C. C. Miller.

GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

"If Bees made glucose some dealers would adulterate it with pure honey." So reads an "ironical if" in a daily newspaper. It expresses the thing about right, too.

◆

Rates to Omaha.—We have received the following, dated May 25, from Commissioner E. Whitcomb, of the Trans-Mississippi and International Exposition, now in operation at Omaha, Nebr.:

> FRIEND YORK:—The rates have already been fixt for both the Trans-Mississippi Exposition at Omaha, as well as for the G. A. R. reunion to be held at Cincinnati, and there doesn't appear to be much difference in them.
>
> I have opened up an office in the Apiary building, where I am to be found at all times. Mrs. Whitcomb will be here to-morrow with her large display of wax work, which will by far outstrip anything before placed on exhibition in that line. We are a little late in getting the Apiarian Building ready, and will be able to extend the time for placing exhibits to July 1. Mr. Stilson is here and engaged in placing Nebraska's exhibit, and it will be a fine one.
>
> The building and its inside arrangements are the finest ever opened to the bee-industries anywhere, and everything has been granted that has been askt for; at this time, if there is anything lacking, it is because we haven't askt for it.
>
> Yours truly, E. WHITCOMB, *Commissioner.*

We may have been misinformed, but we understood some-time ago that the round-trip rate from Chicago to Omaha during the Exposition would be $20. That is about double the Grand Army rate of *one cent a mile.*

We regretted very much to notice that the Omaha Exposition management had decided to keep it open Sundays. We were hoping that they would not make the same mistake the World's Fair people did, and offend those visitors who believe in observing Sunday in the right way. No doubt many will remain away from the Omaha Exposition when they learn that it is to be kept open on Sunday. It might do over in Spain, where they glory in Sunday bull-fights, but in the United States—well, when the Sunday of our honored forefathers is gone we think that our people will realize they have lost a good deal. *We* propose to do our part toward holding on to Sunday as a day of rest and worship.

We hope the Apiarian Building will be kept closed on Sunday during the Exposition in Omaha.

◆

The New Union's Work.—There are now something like 400 members of the United States Bee-Keepers' Union, but there ought to be 4,000. We recently askt the Board of Directors to offer any suggestions that they felt like making in reference to the New Union, and here is what Editor Root, of Gleanings, has to offer:

> EDITOR YORK:—I notice on page 233, you would like to hear from the Board of Directors with regard to the United States Bee-Keepers' Union. You know, of course, just how I stand; but as for complying with your request, I wish to offer nothing but encouragement; and the only suggestion I make is that General Manager Secor blow his horn a little more—that is, tell of some of the things he has done. A recapitulation of his works since he became General Manager would have good effect, in my judgment. You will see by Gleanings that he has settled a very difficult case.
>
> Yours truly, ERNEST R. ROOT, *Director.*

The "difficult case" referred to by Mr. Root is described as follows in Gleanings for May 15:

GENERAL MANAGER SECOR AS AN ARBITRATOR.

> Some time ago I referred to a difficulty between a bee-keeper and a commission-house to the Manager of the United States Bee-Keepers' Union. The case was a particularly difficult one, especially one where collection seemed well nigh out of the question. As a last resort, and with a feeling, I must confess, that nobody could do anything, I referred the matter to Manager Secor. The commission-house in question does a large business in one of our large cities. For certain irregularities we never admitted their quotations. Well, what was my surprise when I found that Mr. Secor had actually compelled them to pay up! and the bee-keeper who, I think, had also given up his case, was so pleased that he turned in $2.00 to the Union for payment of membership in advance, saying that, if that was the way the Union was going to champion the rights of members, he was going to support it.
>
> Manager Secor is a good arbitrator; and if he could bring about a satisfactory settlement in a case that seemed practically hopeless, as was the above, he is a captain.
>
> For years back we have been acting as third party, or arbitrator, between commission-men and bee-keepers; but on many accounts the Union can and should do far better work, and at the same time bring to bear its moral prestige and strength; and I would suggest, therefore, that in future all cases be turned over to General Manager Secor, of Forest City, Iowa, for I am sure he will handle them with discretion and ability. But there is one thing you must not forget to do, and that is to become a member of the Union before you get into trouble. It is hardly fair to expect that the Union would come to your support if you are not already a member.
>
> Every one of our subscribers ought to be allied at once to this organization that stands for the best interests of the bee-keeper and the championship of his rights. Do not wait till you forget about it, but plank down your dollar at once.

It has always been beyond our comprehension why bee-keepers hold back so from joining an organization like the United States Bee-Keepers' Union—one that is managed wholly in their interest. It hardly seems possible that it can be on account of a financial lack, for the membership fee is only $1.00 a year. That may be the reason (and a good one) in some instances, but any one who pretends to do anything at all with bees ought to be able, and very glad, to help in such a wise effort as is being made by the New Union in the interest of its individual members, and thus to the whole bee-keeping industry itself. If we as bee-keepers will not look after our own interests we may be sure no one else will, and

Manager Secor cannot be expected to do very much when there is but little to do with.

Now, we trust that those readers of the American Bee Journal who have not as yet joined the New Union, will do so at once. Why not make it 1,000 strong by the time of the next annual meeting, sometime next September, probably? We will be glad to receive the dollar membership fee from all who prefer to send it to us, and then forward to General Manager Secor, who will mail you a receipt therefor. Of course, you can send direct to Mr. Secor, instead of to us. Address him thus: Hon. Eugene Secor, Forest City, Iowa. If only 50 new members were added per week from now until the next meeting, there would then be almost the first thousand. Surprise Mr. Secor by rolling the dollars toward him for awhile. He's a very cool, quiet, backward sort of man. Pleasant surprises are always a good thing for such people. Encourage him to laugh heartily on account of the great number of dollar membership fees hastening toward them. Begin now.

◆

The Queen-Breeders' Union.—We take the following paragraphs from the Bee-Keepers' Review for May:

> This is an era of organizations, and unions, and fraternities. The latest in this line, in an apicultural way, is the Queen-Breeders' Union. The idea originated with Mr. J. O. Grimsley, of Tennessee. The object is to protect and benefit both queen-breeders and queen-buyers. No breeder will be admitted who has not a *clean* record; and any case of crookedness on the part of a member will cause him to be expelled. Only honest, straight-forward, reliable breeders will be admitted, and if it is found that a mistake has been made in admitting a man, that mistake will be rectified. Expulsion from the Union would practically ruin any breeder's business, and no man will be expelled unless his business proves to be such that it *ought* to be ruined. Of course, not to join the Union need not necessarily be construed as a reflection upon a man's honor or integrity, but to join it shows that he is willing and ready to stand with those who intend to do right; and to place himself in such a position that he *must* do right or be publicly branded as a rogue. If a man buys queens of a member of the Union he can rest assured that he will be treated fairly. If he isn't, he will have in his hands a pretty big club to hold over the head of the man who has dealt unfairly.
>
> Another object of the Union will be to protect its members against dishonest queen-*buyers*. Occasionally there is a man who starts out with the deliberate purpose of defrauding queen-breeders. He orders queens and promises to pay at a certain time; gets all the queens he can on credit of one breeder, and then proceeds to "work" some one else. Of course, a man may not always be able to pay when he has promist to pay, but the man who deliberately goes to work to "beat" queen-breeders will soon find out that they are "on to him," as the saying goes.
>
> The business of organizing this Union has, I believe, been all conducted by mail, and I am not certain that it is yet complete. It is likely that more particulars can be given later.
>
> LATER.—The officers are as follows:
>
> President, G. W. Hufstedler, of Texas; Vice-President, J. B. Case, of Florida; General Manager, W. H. Pridgen, of North Carolina; Secretary and Treasurer, J. O. Grimsley, of Tennessee.

We do not see why such an organization should not be a good thing for all concerned. We shall be glad to publish free a list of the names of the members of the Queen-Breeders' Union, and still gladder to insert continuously in the American Bee Journal, say an inch advertisement for each, at the usual rates.

◆

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for $1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at $1.00), and 10 cents extra.

THE WEEKLY BUDGET

MR. S. T. PETTIT, of Ontario, Canada, reported his bees in extraordinarily good condition May 21. That's the general report this spring.

MR. M. M. RICE, of Grant Co., Wis., wrote May 20:

"Bees are in fine condition, and there is a good outlook for a crop of honey."

MR. M. M. BALDRIDGE, of Kane Co., Ill., reported two swarms, May 16 and 17. Another bee-keeper at the same place wrote us May 23 that he had had 7 swarms up to that date. Bees began to swarm very early this year.

MISS FLORA FITCH—J. A. Golden's fascinating young lady helper—is pictured in Gleanings for May 15. Poor Rambler; he'll be worse upset now, for not even the section-cleaner is shown with her; and when Rambler must face her face without a counter attraction, we don't know what will happen! But then, he's 2,500 miles away, so no one need get uneasy just yet.

MR. THOS. WM. COWAN, the noted editor of the British Bee Journal, was in Chicago last week, and we had the delightful pleasure of making his acquantance, and also that of his wife, who accompanied him. We regretted exceedingly not being able to entertain Mr. and Mrs. Cowan at our home, on account of the ill-health of Mrs. York, who has for the past several months suffered from malarial fever. No one who has been thus afflicted need be told of its very weakening and lingering effect. We hope next week to be able to have more to say regarding Mr. Cowan's visit to this part of the country.

MR. O. O. POPPLETON, of Dade Co., Fla., writing us May 19, said:

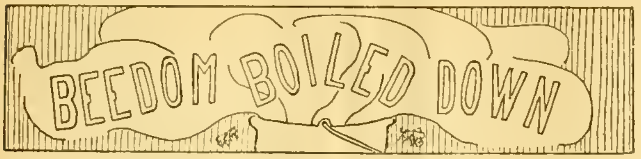
"This is my busy season, running the extractor daytime and reading war news evenings. The honey crop is a very light one. I have out so far an average of only 40 pounds per colony; ought to have had double that by now. May possibly double it during the season. The fire was quite a serious loss to me, not only in bees and one full set of implements, etc., but almost our entire range is burned over. As penny-royal takes about three years to recover itself, the loss will not be confined to this season only."

Mr. Poppleton's fire was thus mentioned in the American Bee-Keeper for May:

"Mr. Poppleton has recently suffered quite a heavy loss as the result of one of his apiaries being located in the wake of one of those destructive fires, which, during the spring months, are constantly raging through the woodlands of South Florida. The bee-house with all its contents, including a new Cowan extractor, uncapping-can, tank with several hundred pounds of honey, and numerous other articles of value, was destroyed. Many hives with bees were damaged, and 11 strong colonies were consumed outright."

We hope Mr. Poppleton will soon recover from the effects of the fire. It no doubt came in a very bad time for him.

THE GENTLEMAN FARMER MAGAZINE is in its 3rd volume. It is gotten up after the style and shape of the Cosmopolitan and similar magazines—only more beautiful, if that is possible. The May number has been on our desk for several weeks, but until now we have been too busy to notice it in this column. It contains about 100 pages, and is most fully illustrated with the finest half-tone engravings. This particular May number contains an article written by Rev. Emerson T. Abbott, of Missouri, entitled "Bee-Culture." We believe it is to be concluded in the June number. It aims to present the subject of bee-keeping in a popular and entertaining way—and Mr. Abbott can do that. Better get the May number. Price 10 cents; or one year for $1.00; or we will club it with the American Bee Journal for a year—both together for only $1.75. Address the Gentleman Farmer Company, Manhattan Building, Chicago, Ill., for a copy, enclosing 10 cents. Then after examining it send us your subscription. You will like the magazine very much.



Good Wintering.—According to Schweizerische Bienenzeitung, colonies have the fewest deaths in winter that are well surrounded with honey, sealed being better than unsealed. *Late* feeding is bad. If compelled to feed, crowd the bees on few frames, give warm feed rapidly, and keep the bees warm.

* * *

Moist or Dry Heat in a Hive.—Referring to page 123 of the Bee Journal, Hasty, in Review, thinks there's a chance for a fight as to whether the air in a hive is moist or dry. On the one hand, so much evaporation of nectar must make things wet, and on the other hand unless the air was pretty dry there couldn't be evaporation.

* * *

Young Queens to Prevent Swarming.—One year Gravenhorst, early in May, removed 20 old queens, replacing them with queens that had just begun to lay; 19 of the 20 colonies swarmed. But when the young queen is reared in the colony, he has never known such young queen to swarm that year.—Deutsche Ill. Bztg.

* * *

Finisht Sections—are they Desirable?—Editor Hill says this has been developt as a new question in connection with plain sections—whether sections should be filled and finisht to the wood on all sides—and he votes yes. But he thinks the projecting side-pieces of the section are a valuable protection to the comb in handling.—American Bee-Keeper.

* * *

Age of Queens.—Experiments at Flacht showed that in fall and winter 10 per cent. of two-year-old queens disappeared and no one-year-olds. Of colonies with two-year-old queens, 30 per cent. began breeding early in the last mild winter, and 60 per cent. of the colonies with one-year-old queens were already stronger than the preceding October.—Centralblatt.

* * *

Painting Hives is vetoed by Doolittle, but J. H. Martin says in Gleanings, that while such a view may be all right for York State, in hot climates honey will melt down in a hive not kept well painted and white. To which Doolittle may reply that the same rule holds in York State if hives have no protection from the sun, but in the shade a white hive will melt its honey as quickly as a black one.

* * *

Something Against Fall Feeding.—E. E. Hasty, in Review, refers to the interesting report of "Iowa," in American Bee Journal (page 122) and thinks the colony that lost 24½ pounds after having been fed, might have lost only four if it had not been disturbed by feeding. He says: "In my opposition to fall feeding, except when absolutely necessary, I have been pretty lonesome in this generation; but a hundred years hence there'll be more of me."

* * *

Wintering on Sealed Honey.—F. A. Gemmill united two normal colonies about Nov. 5, and put them on four Langstroth frames of sealed honey. They remained perfectly quiet when other colonies flew Feb. 10; and March 11, after 3½ months' confinement, they showed no more need of a flight than if they had only been confined a month. Pretty good evidence that empty cells are not absolutely essential for wintering.—Canadian Bee Journal.

* * *

The Ideal Super is the rather imposing name applied to a super that has won Editor E. R. Root from his loyalty to the section-holder, and seems to be in a fair way to secure the allegiance of Dr. Miller to the abandonment of the T super, *if* fences and plain sections are to be used. The Ideal takes tall sections, the super having a strip of tin as a support at each end at the bottom, the same as the T super, but in place of T tins it has plain wooden bottom-bars running lengthwise, the sections resting on these bottom-bars. Evidently the doctor cannot resist the temptation to poke a little fun at Editor Root, with whom he has for a long time been at sword's points regarding the matter of supers, and he reaches after him in the following style:

"And I've thought that, if he'd handle a lot of T supers for a single season *as they ought to be handled*, he might change his tune. First he believed in wide frames—wide frames with top-bar, bottom-bar, end-bar. For a time, if I'm not mistaken, he believed in T supers, and then he went back to wide frames just a step nearer T supers than the old wide frames by leaving off the top-bar, and he called them section-holders. Now he's gone another step toward the T super, left off the end-bar, and dubs it Ideal. If he'll go still another step and leave off the bottom-bar, perhaps he'll stand square in line with me."—Gleanings, page 386.

* * *

Carbon Bisulphide for Fumigating Honey is recommended by J. S. Woodward (National Stockman) in preference to sulphur, as the latter makes him sick. Put the honey in a place that can be closed tight—for the size of a flour-barrel put two tablespoonfuls of carbon bisulphide in a saucer or flat dish on top, then cover up. Leave over night, and treat again in two or three weeks. But be careful in handling it, for its fumes are poisonous, and it is inflammable and explosive.

* * *

Honey vs. Sugar.—In Stray Straws (Gleanings, page 378,) a case is mentioned in which physicians have forbidden the use of starch and sugar, but allow pure honey. The Stray Straw man uses honey instead of sugar in hot drink, and likes it as well as sugar if the honey is of best quality. The editor is very positive that there is a decided difference in his own case, as he is able to eat a certain amount of honey without inconvenience, but cane sugars, maple sugars, candy, and all such stuff, he is obliged to let alone.

* * *

Flights in Wintering.—D. W. Heise, in Canadian Bee Journal, referring to the statement "that the bees that have the greatest number of winter flights in cold, hard winters, are the ones that come out best in the spring," wonders whether that's the whole truth, and thinks if he could control the matter he'd have just one flight a month. But there is probably no conflict of opinion, for remember, Mr. Heise, it's "cold, hard winters" that are spoken of, and in "cold, hard winters" the bees are not likely to fly more than once a month.

* * *

Rate of Storing Honey.—To many who have been accustomed to hear of the large yields of honey in California, the natural supposition probably is that more honey is secured there in a day than farther north and east. But W. A. H. Gilstrap (Gleanings, page 391) says: "I am convinced that it is not common for bees to store honey as rapidly here as in the east. Your bees store perhaps over half as much in 30 days as ours do in 100. An apiary storing three pounds of alfalfa honey per day for each colony would be a good run. I have never been able to extract so much."

* * *

Well-Finisht Sections for Shipping.—R. C. Aikin thinks there would be little trouble about combs breaking out of sections when shipt if they were well fastened to the wood all around (Gleanings, page 381.) Poor attachments are likely to be made in slow flows, with weak colonies, or when too much super room is given. He is strongly in favor of bottom starters, and has a large per cent. of sections better fastened at bottom than at sides. There is trouble with bottom starters curling over when too deep, but he finds they will answer the purpose nearly as well if only ¼ or ⅜-inch deep, and when thus narrow will not curl over.

* * *

Time of Mating and Laying.—Doolittle gives some figures (Gleanings, page 396.) The first young queen emerges from her cell in about seven days after the prime swarm issues. Queens which have their own way fly to meet the drone when about five to seven days old, and begin to lay two or three days later; 17 days is the shortest time a young queen is likely to be laying after the prime swarm issues. But eggs are so scarce that it is hardly worth while to look for them till three or four days later. If after-swarms issue, then the time is lengthened several days. Mr. Doolittle's practice is to look for brood or eggs the 23rd day from swarming if there are no after-swarms, and four days later if there are after-swarms.

* * *

Getting Big Prices for Honey seems to be a specialty with Chalon Fowls (Gleanings, page 384.) Last season he got an average of 12 cents a pound for his comb honey, and 10 cents for extracted, ¾ of his crop being extracted. An article in a former number of the American Bee Journal gives his plan of selling, but that alone will hardly account for this fact, which he states: "It is a significant fact that in the town of Elyria, a town of about 10,000, *every one* of the grocers handles my extracted honey, paying cash on delivery, and they will not buy of others, even when offered at a lower price." Perhaps the chief secret lies in this sentence: "The extracted honey is ripened in the hive, and always weighs 12 pounds or more to the gallon."

DR. PEIRO,

CENTRAL MUSIC HALL, CHICAGO.

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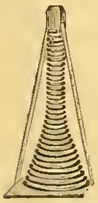

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Congregational Home Missionary Society

meeting will be held in Cleveland, Ohio, June 7 to 9, inclusive, account of which the Nickel Plate Road will sell tickets at $11.35 for the round trip on certificate plan. Dates of sale June 3, 4, 5 and 6, inclusive. Tickets good returning until and including June 13. For further particulars address J. Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone Main 3389.

GENERAL ITEMS

Buckwheat in Bloom.

I had only 3 colonies, and have had 2 swarms so far this year, but I expect 4 more. I am taking no honey from them, and won't this year, as I will let them increase. I have ½ acre of Chinese buckwheat in bloom, and the bees are working hard. PIERCE O'HURLEY.

Choctaw Nation, Ind. Ter., May 24.

◆

Report for 1897.

I produced 2,500 pounds of comb honey last season, from 43 colonies, spring count, and sold it before winter, at an average of 13 cents per pound, all within 12 miles of home. I had calls for more, but I could not furnish it. I increast to 73 colonies, lost 3 during the winter, and I am now doubling some of my hybrids.

I had my first swarm of this season to-day—May 26. W. R. CLOVER.

Vermillion Co., Ind.

◆

"Converted" Bees!

Our bees are doing well. Fruit-bloom is in all its glory. I cannot understand why so many of my bees have turned Methodists—they used to be Presbyterians—but now they swarm on Sunday! Two yesterday—one before 9 a.m. If I had my choice in the matter I would rather they would remain united for at least three weeks longer, as I am a cripple at present, and cannot attend to swarming. But I expect to be on toe-path again in a week or so.

D. W. HEISE.

Ontario, Canada, May 23.

◆

Starved in Winter.

I lost quite a number of my bees last winter through starvation—5 out of 20. The weather kept so cold that I didn't dare to open the hives, but the rest are in good condition. They swarmed first May 23. They didn't get much honey out of the fruit-blossoms this year, as the weather was so cold, but it is pleasant now. At present they work on the dandelions, which are plentiful here. The white clover is in fine condition this year, and will soon blossom. There is a great deal of it here. It is the main honey harvest in this part of the country. LEWIS HARTING.

Ida Co., Iowa, May 25.

◆

Bees in Good Condition.

I have 14 colonies of bees all in good condition but one, which was weak and queenless. I gave them a frame of brood from another hive, and they have reared a queen, or at least there are a number of empty queen-cells, tho I have not lookt for the queen. I will give them another frame of brood soon.

Apples and plums are heavy with bloom, and bees are working lively. I have about an acre of strawberries in bloom, but haven't seen a bee on them yet, while the dandelions are alive with them. They have always workt very lively, however, on the raspberries—especially the reds—of which I have about

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three acres; but they haven't bloomed yet.

There is a good prospect for white clover. There is no basswood near me, but there is an abundance about five miles away. Will it pay to move my bees into the vicinity of the basswood about the time it begins to bloom, and then back again after it is over.

I have gotten a good deal of help from the American Bee Journal.

J. RIDLEY.
Winneshiek Co., Iowa, May 21.

[It depends very much upon whether the basswood yields or not, as to moving the bees so as to work on it. Some years it has bloomed profusely and still yielded no nectar. Just why is not known. But you could try the experiment this year, if not too much work, and report results.—EDITOR.]

Most Colonies Strong.

My 72 colonies of bees have wintered well in 8 and 10 frame "St. Joe" hives, on the summer stands with Hill's device, and from 2 to 4 inches of chaff over them. I lost one that starved, and have divided two, thus filling the empty hive and making a gain of one. Most of my colonies are remarkably strong for this time of the year, and will swarm 10 days earlier than last year.

I could not, and will not, keep bees without the American Bee Journal. I get valuable help from its reading.

WM. C. HUDNALL.
Fulton Co., Ill., May 20.

A Busy Bee-Keeper.

This is a very busy season for me. I am on a 200-acre dairy farm, with a milk route, which I run myself. I have 25 colonies of bees to look after, and am preparing to build a house, barn and well on a place of 36 acres which I have recently bought, and to which I expect to move next spring. I have been putting in small fruit and improving other ways.

Bees came out of the cellar in fine condition, and everything has been favorable. They are building up splendidly. I have had one fine, large swarm, and other colonies are preparing to swarm. Apple bloom lasted longer than usual, and yielded well, and then wild crabs followed. White clover is looking nice, and there is every prospect of a prosperous year for the bees.

I like the Bee Journal very much, especially the editorial comments, which I read first.

S. H. HERRICK.
Winnebago Co., Ill., May 25.

Sweet Clover—Wintering Queens.

The Bee Journal is always interesting to me, but sometimes more than usually so, as this sweet clover number of April 21. There is much in the experience of J. F. Rosenfeld that is parallel with my own. I, too, have a litte patch from which each season I dig plants to put elsewhere. The main object of this is to spread the clover, but there is a secondary one, which is, to give the clover that is left opportunity for development. It likes abundant room, and I have had it growing as luxuriantly as it is pictured in the illustration, and a beautiful, fragrant plant it is when in full bloom. I was glad to be able to read this article,

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February 21, 1898. A. F. SEWARD, Riverside, Calif.

9A9t **T. F. BINGHAM, Farwell, Michigan.**

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especially the closing paragraphs, to Mr. Amos, for he looks upon me as a sort of crank on the subject of sweet clover.

The paragraph on "Killing old bees in the fall," suggests a matter on which I think there is room for experiment and study—that is, how to keep queens without keeping more bees than are necessary or useful. I tried that in a small way myself the past winter. I wintered a young queen, reared late in the season, in an observatory hive. She came through in good condition, and is now laying vigorously, as I needed her for a queenless colony. Here our main honey-flow comes after June, so there is a long season in which to build up.

The past winter I carried through two small colonies whose queens began to lay in August, and were encouraged to lay as long as they would, so that most of the bees were young when put into winter array. They did not seem large enough to winter alone, so I took one of my big chaff hives and fitted a divisinn-board bee-tight, and put a little colony on each side, seeing that the frames given them—four and five—were well filled. They came through the winter in good condition, and I would be well pleased to have more such *double* colonies.

(MRS.) A. L. AMOS.

Custer Co., Nebr., May 10.

All to Keep Sweet.

Bees are doing well and are in good condition. Locusts are in bloom, and white clover is just beginning to bloom. The prospect is good for a fair crop of honey. I hope there will be enough sweetness to keep us all sweet, and enough to sell, so that we can keep our subscriptions paid in advance, and the editor "sweet" as well.

W. S. FEEBACK.

Nicholas Co., Ky., May 23.

Prospects in Utah.

The chances for a good honey year here appear to be good. There has been an abundance of rain, which seems to have assured good crops even on the dry farms, which lie above the irrigating canals, while everywhere in the irrigated districts everything is growing in abundance. This will insure lots of bloom, which in turn will give us lots of honey, but of which I will write later.

Success to the American Bee Journal. The trouble is to get new subscribers; it takes care of the old ones itself. It is like the use of foundation, it needs some coaxing to get it started, but when once started it holds its own.

E. S. LOVESY.

Salt Lake Co., Utah, May 23.

P. S.—Since receiving the mail to-day, I find that the excessive amount of rain, and consequently more or less cold weather, is causing some loss among the bees in some portions of the State, but we believe the rainy season will soon be over, when a good honey-flow will be assured. E. S. L.

Italians Behind So Far.

I started this spring with six colonies in 8-frame dovetailed hives, with the following variety of bees: Two golden Italians, one grey Carniolan, and three hybrids. I bought three box-hives of black bees, transferred them April 2 to 8-frame hives. I am running for comb

"A Queenly Deceiver."

"He fools his customers by sending more than is expected."—See page 105, current volume Bee Journal, and ask for the free pamphlet referred to. I am now prepared to fill orders promptly with FINE YELLOW-TO-THE-TIP **QUEENS,** or daughters of imported stock mated to golden drones, at 75c each. Purely-mated Queens reared from the best stock and by the best method known, is what I furnish, and will prove it to all who give me a chance. Money Order Office, Warrenton.

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200 eggs capacity. Good as new. Used for only two batches. Everything complete. Will sell it for **TWENTY DOLLARS,** half the cost price

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Texas Queens

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Tested Queens in April and May, $1.00. Untested, 75c. Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

F. A. CROWELL,
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Bees for Sale in Indiana!

Italian Bees in 8-frame Langstroth hives. Per colony $5.00; 5 or more at one time $4 50 per colony. I have only a limited number for sale. They are strong colonies, and ready for business. Address, **W. H. WATTS,**
19Atf **Ross, Lake Co., Ind.**

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QUEENS Italian stock. Untested, 70c each; 3 for $2.00 After July 1, 50 cents each; tested, $1.00 each. **Root's Goods at Root's Prices.** Prompt shipment and satisfaction guaranteed. Catalog free.

THEODORE BENDER,
20Atf **Canton, Ohio.**

First Excursion of the Season to Cleveland

via Nickel Plate Road, June 3 to 6, inclusive. $11.35 for the round-trip on certificate plan. Tickets good returning until June 13, inclusive. Three through trains daily from Van Buren Street Passenger Station, Chicago. For further information address J. Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone Main 3389.

honey. Up to date (May 18) I have gotten from one Carniolan colony, 47 pounds of well filled sections; from three Italians, 17 pounds—some of it from a swarm hived March 22. Three black colonies have furnisht 39 pounds; the hybrids nothing, and little prospects of any. It is a bad showing for the much-praised Italians and their blood.

Our honey is all gathered from trees and bushes, only a small quantity from annuals, even the clovers, excepting the Japan, which will furnish some later on. Until that time is past, I will not pass sentence on the Italians, hoping they will redeem themselves. They are good swarmers. L. W. M. Roe.

Washington Co., Ala., May 18.

Wet and Cold Spring.

It is very wet and cold here this spring. Bees are not doing much.

Luther Bryant.

Wayne Co., Pa., May 23.

Cool Weather.

My bees are doing fairly well considering the cool weather. J. A. Flett.

Hennepin Co., Minn., May 15.

Short Winter.

My bees all came through the winter on the summer stands without the loss of a colony. I had my first swarm for this year May 20. Bees brought in honey and pollen Nov. 20, 1897; brought me the first this year March 16. This was a short winter for this section of country. D. H. Metcalf.

Calhoun Co., Mich., May 22.

White Clover in Bloom.

Bees are doing fairly well now, but have done nothing all spring until now, owing to a late freeze and too much rain. I have been out all week doing bee-work, for 20 miles around, and find the bees in fairly good condition. White clover is now in full bloom, and we look for quite a little honey from that source.

J. R. Gibson.

Ripley Co., Mo., May 19.

Good Prospect for a Honey Crop.

My bees are in fine condition. They commenced swarming April 2, but on May 1, all at once, they were quiet. I saved 21 swarms.

Myself and boy found a bee-tree in 1895 with Italian bees. We cut it, put the bees into a box-hive, and in three years we had 44 good colonies, and lost some by going to the woods, and some died in 1896—the hard year for bees in this country.

We have 78 colonies now. The prospect for a honey crop is good.

A. R. Yandell.

Scott Co., Ark., May 19.

A Very "Swarmy" Swarm.

Bees are doing well, and have been swarming for some days. They are very much inclined to want to go to the woods. Some years ago I had a swarm hived on a frame of eggs and hatching brood come out the next day; hived and put in another frame of brood, came out again the next day; hived again and

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Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

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that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

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We have arranged with a large bee-keeper in Lee County, Ill., (about 100 miles west of Chicago), to fill our orders for Italian Bees at the following prices there, which include a good Queen with each colony:

8 L. frames of bees in light shipping-case, $3.75
5 at $3.50 each.

8 L. frames of bees in dovetailed hive, $4.25.
5 at $4.00 each.

Prompt shipment after May 1, and safe arrival and satisfaction guaranteed. Address

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—ITALIAN—

Bees and Queens

Queens $1.00; Bees by the pound $1.00; Nuclei, two frames with Queen, $2.00; one-frame $1.50. Also **Barred and White P. Rocks and Silver-Laced Wyandottes.** Eggs for Sitting at $1.00 per 15.

17A8t **Mrs. A. A. Simpson, Swarts, Pa.**

Please mention Bee Journal when writing.

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For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 27 cents per pound, CASH. No commission. Now if you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

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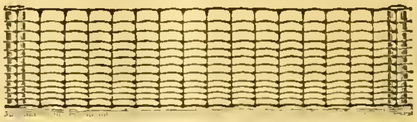
118 Michigan st., CHICAGO, ILL.



Armed Intervention

is not necessary to the peace of stock or safety of crops about which **Page Fence** is erected.

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AUGUST WEISS, Hortonville, Wisconsin.

gave the third frame of brood, and they came out the fourth time, and I told them to "go it," and they went. What was the matter? JNO. M. KELLY.

Jackson Co., Ala., May 21.

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

Excursion to Cleveland.

The Nickel Plate Road will sell tickets from Chicago to Cleveland and return at a fare and one-third for the round-trip on certificate plan, good going June 3,4, 5 and 6, and good returning until June 13, inclusive, on occasion of the annual meeting of the Congregational Home Missionary Society in that city. This rate will be $11.35 for the round-trip, which is somewhat lower than via other lines. Those desiring space in sleeping-cars should make early application in order to secure the best accommodations.

Any further information cheerfully given by addressing J. Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone Main 3389.

Fresno Co., Calif.—The next quarterly meeting of the Fresno County Bee-Keepers' Association will be held at the City Hall, in Fresno, Calif., Wednesday, June 8, at 1 o'clock p. m. Constitution and By-Laws are to be adopted. Marketing honey and other business is to come up for consideration.

W. A. H. GILSTRAP, Sec.

Caruthers, Calif.

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BEST OF A DOZEN STRAINS

EAST SIDNEY, N.Y., April 29, 1898.

I had your strain of bees and it was by far the best of a dozen strains from other breeders. They were great workers.—L. C. JUDSON.

One Queen, $1.00; three Queens, $2.75; six Queens, $5.50.

HENRY ALLEY, Wenham, Mass.

22A2t Please mention the Bee Journal.

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VAN ALLEN & WILLIAMS,
10Etf **Barnum, Wisconsin.**

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Golden Italian Queens Cheap!

If you want **BEES FOR BUSINESS,** send for my Catalog of prices. . . . .
18Etf **J. F. MICHAEL,** Greenville, Ohio.

Please mention Bee Journal when writing.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, May 19.—Very little call for honey, and the offerings also limited. Prices without change from late quotations. California extracted sells well and the stocks here are light. Weather now warm and prospects generally reported good in the surrounding States. Beeswax scarce, and 27 to 30c is bid for it. R. A. BURNETT & CO.

Kansas City, May 19.—The supply of 1897 comb and extracted honey is about all sold. Considerable inquiry for new comb. Something fancy would bring a good price.

C. C. CLEMONS & CO.

Cincinnati, May 21.—Demand is slow for all kinds of honey, especially comb. Prices for best white comb honey, 10 to 13 cents. Extracted honey brings 3½ to 6c. according to quality. Beeswax in good demand at 25 to 28c for good to choice ye low.

CHAS. F. MUTH & SON.

Boston, May 20.—Fancy No. 1, in cartons, 13c.; in glass-front cases, 12c.; A No. 1, 11c.; No. 1, 9 to 10c.; No. 2, no sale. Extracted, white, 6@7c.; light amber, 5@6c. Beeswax is in very light supply, and if pure would readily bring 27c.

There is nothing new to note in our market for honey. As usual at this time of year, the demand has dropt to almost nothing, but as the supply is light, prices are well maintained and firm. BLAKE, SCOTT & LEE.

Cleveland, May 20.—Fancy white, 12 to 12½c.; No. 1, 11c.; No. 1 amber, 9 to 10c.; buckwheat, 8c. Extracted, white, 6c.; amber, 4 to 5c. A. B. WILLIAMS & CO.

San Francisco, May 11.—White comb, 8½ to 10c; amber, 6½ to 7½c. Extracted, white, 5½@6c.; light amber, 4¾ to 5¼c. Beeswax, 23@25c

The French bark Alice, sailing Sunday for London, carried 135 cases of extracted honey. This will probably be the last shipment to Europe for some time. Stocks of extracted are now very light. Comb is still in fair supply. Values throughout are being well sustained

Detroit, May 21.—Fancy white honey is lower and now quoted at 11c. No. 1, 9@10c; fancy dark, 7@8c; No. 1 dark, 6@7c. Extracted, white, 5@6c; dark, 4@5c. Beeswax 27@28c.

There are no changes in quotations, and very little desirable honey left. Sales are so slow that it is difficult to quote. The poor lots are being pusht at what they will bring.

M. H. HUNT.

Minneapolis, May 20—Honey much more encouraging. Fancy white clover comb is selling here now at 10½@11½c. Not advisable to ship darker than amber. Extracted fancy white clover, 5½@6c; amber, 5c; dark, 4@4½c.

Outlook for honey much more encouraging.

S. H. HALL & CO.

Indianapolis, May 21.—Fancy white 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand. WALTER S. POUDER.

Milwaukee, May 20.—Fancy 1-pound sections, 11@12c; A No. 1, 10@11 cents; No. 1 8@10c; amber, 8@8½c; dark, 7@7½c. White extracted in barrels and kegs, 5½@6c; amber, 5@5½c. Beeswax, 26@28c.

The demand for honey continues very good indeed, and values fairly sustained. While the best grades are most salable, the inferior grades meet attention, and the movements are quite satisfactory. A. V. BISHOP & CO.

Buffalo, May 21.—There is a very good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

St. Louis, May 20.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

WESTCOTT COM. CO.

Bee-Keepers!

We Have a Large Stock of

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And are now in fine shape to fill your orders promptly. Send us your orders and we will use you right.

THE ONE-PIECE SECTION COMPANY,

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June 1, 1898. 7Ctf

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EGGS From pure bred, barred P. Rocks Large and fine plumaged. $1.00 per 15. Also Light Brahmas and Black Langshans, same price. B. P. Rock Cockerels, $1.25.

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Tells all about Bees in California.

The Yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by and expert bee-man. Besides this, the paper also tells you all about **California Agriculture and Horticulture.** $1.00 per Year; Six Months, 50 cents. Sample Copies 10 cents.

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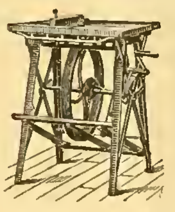

Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will. Catalogue and Price-List Free. Address, W. F. & JOHN BARNES,
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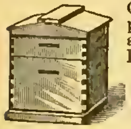

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Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**
Cash for Beeswax. BELL BRANCH, MICH.

I ARISE

TO SAY to the readers of the BEE JOURNAL that **DOOLITTLE** has concluded to sell —BEES and QUEENS— in their season, during 1898, at the following prices:

One Colony of Italians on 9 Gallup frames, in light shipping-box	$6 00
Five Colonies.....	25 00
Ten Colonies......	45 00
1 untested queen.	1 00
6 " queens	5 50
12 " "	10 00
1 tested Queen...	$1 50
3 " Queens.	3 50
1 select tested queen	2 00
3 " " Queens	4 00
Select tested queen, previous season's rearing .	3 00
Extra Selected for breeding, THE VERY BEST..	5 00

About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

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Circular free, giving full particulars regarding the Bees and each class of Queens.

Address
G. M. DOOLITTLE,
1A25t BORODINO, Onon. Co., N. Y.

21st Year Dadant's Foundation. 21st Year

Why does it sell so Well?

Because it has always given better satisfaction than any other.
Because **IN 21 YEARS** there have not been any complaints, but thousands of compliments.

We Guarantee Satisfaction.

What more can anybody do? **Beauty, Purity, Firmness, No Sagging. No Loss. PATENT WEED PROCESS SHEETING.**

Send Name for our Catalog, Samples of Foundation and Veil Material. We sell the best VEILS, cotton or silk.

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LANGSTROTH ON THE HONEY-BEE, Revised.
The Classic in Bee-Culture—Price, $1.25, by mail.

Foundation and Beeswax Prices Advanced.—We quote an advance of three cents in Foundation, wholesale and retail, on the prices quoted in our Circular. BEESWAX WANTED, at advanced prices also.

CHAS. DADANT & SON,
Please mention the Am. Bee Journal. **HAMILTON, Hancock Co., ILL.**

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SECTIONS, SHIPPING-CASES, —AND— BEE-KEEPERS' SUPPLIES.

We make a specialty of making the very best Sections on the market. The **BASSWOOD** in this part of Wisconsin is acknowledged by all to be the best for making **the One-Piece Honey-Sections**—selected, young, and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

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Publisht Weekly at 118 Michigan St. GEORGE W. YORK, EDITOR. $1.00 a Year—Sample Copy Free.

38th Year. CHICAGO, ILL., JUNE 9, 1898. No. 23.

CONTRIBUTED ARTICLES

Avoiding Pollen or Bee-Bread in the Sections.

BY C. DAVENPORT.

In my last I made mention of the fact that the previous season I lost a large amount—large at least for a bee-keeper—by not understanding the business of producing honey better than I do. This loss was caused partly by bee-bread. A number of thousand sections, when finisht, contained so much of this that they were unsalable, and the honey in thousands more was so poorly fastened to the wood that it was almost impossible to haul them to the nearest towns without breakage, let alone shipping them. In fact, a great many were broken in handling before they left the apiary, as a large part of them were but slightly attacht to the wood at the top.

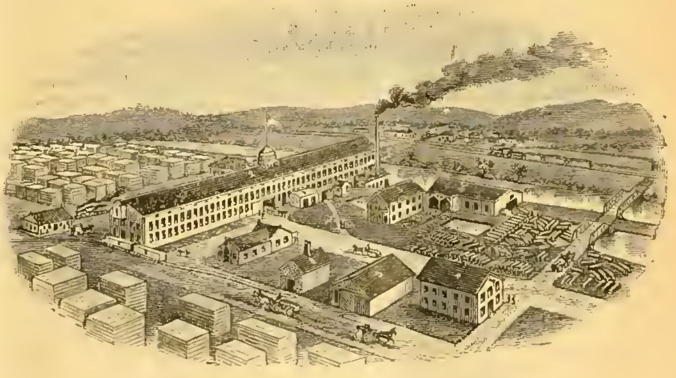
With but few exceptions, bee-bread or pollen in sections has always caused me some loss each season, and to a less extent sections containing honey imperfectly fastened also, but never before anything like this. The year before, under the same management, there was practically no loss from either cause. The season might, therefore, in some sense, be accounted to blame, but a bee-keeper in order to make a success of the business at present must be able, and understand how, to meet the conditions of different seasons, and I have no doubt this loss I have described might have been avoided if one had known how; and while I will admit that I might not be able to entirely avoid it if the same conditions were to occur again this season, yet I consider what I did learn in regard to the matter was of more benfit to me than what was lost; that is, that it will, or may, be in the years to come, for I am a young man yet, and expect to continue to follow bee-keeping as a business in the future.

As I have said, what I learned last year cost me hundreds of dollars, and now it is to be laid before the reader at a cost to them of but a fraction of a cent. I wonder if many of us appreciate what benefit a first-class journal like this is to its readers. By this I do not necessarily mean that anything from me may be of value, but there are hundreds of others who each year, through its columns, tell us their experiences, and what is constantly being learned that is of value to our pursuit. There have been in the past, and no doubt there will be in the future, single copies that are worth much more to me than the entire numbers cost for a year. But to return to the matter in hand.

I will first say that pollen in this my immediate locality is very abundant through the entire season, but as this is used mainly in brood-rearing, the natural instinct of bees causes them, when conditions are so they can, to store it in the brood-chamber, where it will be easily accessible for this purpose. But the plan I follow with swarms, either natural or artificial, and one which I believe is largely practiced, is to hive them in a hive with frames containing only starters, when, if the supers from the parent hives, in which work has already commenced, is put on in a day or two, work will be resumed in them at once, and a good queen will usually lay in a large part of the comb below as fast as it is built, so that most of the honey brought in is necessarily for sometime stored in the sections.

I do not believe there is any other method by which as much honey can be secured in sections, and in a good season, or during a good flow, a swarm when first hived will not bring in much pollen for a few days. Last year the flow, except during the first few days, was very scant and irregular, and as it was those swarms treated the way I have described that put pollen in the sections, it will be seen that this method should not be practiced during a poor flow in a locality where pollen is as abundant as it is here, for when they cannot secure honey, if pollen is plentiful, they will carry in an excessive amount of it, and must of necessity store it in the sections.

Now, I have not much doubt that two, or possibly one, frame in each hive containing drawn comb, then waiting until considerable comb was built before putting on the sections, would overcome the difficulty, or if no frames containing combs were on hand, a like number filled with foundation would probably prove effective.



Bee-Supply Factory of The W. T. Falconer Mfg. Co.—One of our Advertisers.

There is so much pollen here that colonies that did not swarm would ofttimes carry it into the sections; but years ago I accidentally learned how to almost entirely overcome this by changing the places of combs in the hive. This was done to discourage swarming.

My practice was, and is largely yet, at the approach of the swarming season to replace the two outside combs with those that contain the most sealed brood, the two from the outside which usually contain a large proportion of what pollen there is in the hive are then placed in the center. If done at the right time this has a tendency to check swarming, and I soon noticed sections over colonies so treated hardly ever contained any pollen. Such an abundance of pollen right in the center of the brood-nest may possibly act as a check to their gathering much more for a time. However this may be, there would soon be plenty of room for them to store a large amount again in the two outside combs.

As to sections containing honey but slightly fastened to the wood, I believe there are means by which this can be largely avoided, no matter what the character of the flow is, and even if only small starters are used. But as this article is already so long I will have to wait to explain my experiments in regard to this matter until some other time.

Southern Minnesota.

The Influence of Change of Locality, Climate, Etc., Upon the Qualities of the Honey-Bee.

BY WM. S. BARCLAY.

It is with no small degree of trepidation that I approach the discussion of the above topic. Not because I think it lacks in importance or interest to attract the attention of the general bee-keeper, but because of my limited field of observation, and my probable inability to bring to bear the important points which the subject demands.

I have bred the bee with much care since 1855; in that time I have become pretty familiar with the characteristics of the German, Italian, Syrian, Holy Land, Hungarian and Carniolan—all, I believe, except the Cyprian. It is needless, I presume, to say that the Italian has led in all my experiments, if I may except a cross I effected of the Italian with the Syrian, which, after severe test of years, I still greatly prefer. But I am not now going into a discussion of the value of different races, which does not properly belong here, but which I will reserve for another article.

For a long time it has been my custom to introduce fresh blood into my apiary every third year, many times producing great benefits, but at other times, I am sorry to say, greatly to my injury. When this last result occurred, at one time nearly ruining my apiary, I was disposed to reflect severely on queen-breeders. (I have bought queens all over the United States, and at the same time bred from imported queens.) In selecting queen-breeders from whom to purchase, I chose those with whose reputation I was acquainted. After waiting until the progeny of the queens showed themselves, to find out after the lapse of a month I had been deceived, you may well believe I was greatly disappointed.

Of course, when the character of the bees proved materially different, and perhaps entirely opposite to that promist, I was disposed to reflect severely upon the queen-breeder, and this continued for years until I had nearly lost faith in queen-breeders—in fact, until I saw the result of some of my own queens sent away. It had never occurred to my mind that the cause of failure lie in another direction. It had never occurred to me that climatic influences, difference of locality, pasturage, water, and other conditions become the priucipal factor in the cause of change. We are quick to observe the effect of this condition in the breeding of other stock, and if with them, why not with the bee?

For instance, every bee-keeper knows to what great extent water enters into the composition of the food of the bee. Let this be materally different, may it not alone effect the change? What bee-keeper does not know that a very slight matter will affect the temper and disposition of the colony for a whole season?

I have as an illustration only mentioned one point, that of water. It would be natural to suppose that the changes of climate, and of location, with probably an entire change of honey resources, would effect still greater change in the disposition and characteristics of the bee.

I am loth to believe that those parties with whom I have dealt are at fault, and have written this not to beget controversy on the subject, but to suggest a reason for the apparently strange variation in the conduct of the bees, and as an apology for queen-breeders who may be unjustly blamed for acting unfairly.

Beaver Co., Pa.

Slotted or Cleated Separators and Drawn Comb.

BY S. A. DEACON.

The late Mr. Allen Pringle, in his essay, read at the Toronto convention, said it was a mistake to use wide sections, and we know that that equally good authority—the late Mr. B. Taylor—used, and advised others to use, narrow sections—I think 7 to the foot—*together with* his slotted and cleated separators; advice which for the last two years I have very satisfactorily followed. But as hitherto minute details have not appeared in the Bee Journal as to the easiest or most convenient method of making these cleated separators, I will venture to give a very simple plan recently adopted by myself.

First obtain a plank fully 4¼ inches wide, and fully 18 inches long. On this place four folded sections, and with a pencil make a scribe where they come together. These pencil lines will be a guide for tacking down pieces of sections.

In the grooves thus made place the cleats (5/16 inch bits of section—the two end cleats being half inch wide). Now take a sawn wooden separator, and lay it over the plank, when the little cleats, lying loosely in the grooves, will be just in the right place, ready to be fixt with the wee wire tacks which are driven in the corresponding cleat lying accurately above it, *i. e.*, on the upper side of the separator.

Next place a bit of plank 4 inches wide on the bench, place the separator on it—between the cleats—and with a ¼-inch chisel chip out the groove. You have then a rigid, strong "B. Taylor grooved and cleated separator"—for use with 7 to the foot section.

HOME-MADE DRAWN FOUNDATION.

What a fuss you people over the water made about the *new* drawn comb! Why, it is nothing new at all. I have been making it for years past; and shall continue to do so in spite of Messrs. Weed and Root's patent-rights. I have long had an extensive factory, employing a vast number of hands, for the making of this same drawn comb; and, seeing that my employes work for nothing and board themselves, I can even undersell The A. I. Root Co. At this moment of writing I have four distinct factories going. Each factory has 10 brood-frames, mostly full of brood, and a super containing 10 shallow extracting frames, each frame containing a sheet of "extra-thin" super foundation. The little workers, by-the-by, do not altogether board themselves, for I give them a little syrup every evening, costing say 3 cents, and in return they draw out, in less than 48 hours, these 10 sheets of "extra-thin," so that the cells are nearly ¼ inch deep. They are then taken off, cut out of the frame, cut into squares with a ½ moon suet chopping-knife (kindly lent by the presiding goddess of the culinary department), and fixt in the sections.

Weed's process may give a slightly thinner septum, but as my little experts make it, it is quite good enough, and the trifle the feed costs is really not worth taking into calculation. Of course, if the Root Company can supply the Weed comb at a *very* small advance in the price of ordinary foundation, and the extra freight does not materially enhance its cost, it would serve the convenience of many bee-keepers to buy that in preference to running their own little dovetailed factories, but the old way satisfies me.

To have the foundation drawn out expeditiously it is of course necessary to give a little feed regularly every evening.

South Africa.

Some Experiences of the Season of 1897.

BY GEORGE REX, JR.

During a summer's work among the bees one experiences much that is queer and droll; and if at the end of the season our thoughts lead us back to the blunders and mistakes of the past, we would all be ready to say: If I would have to do this or that over again I would do better, altho should we live it over again we likely would do as before. The past can be criticised, the present is in our hands, and the future is a blank.

In May, 1897, I had an experience in swarming which lookt disastrous at first, but later proved profitable. It was as follows:

One day a swarm issued from a hive (No. 1), but before it settled it returned to the parent hive again. Next day No. 1 came out again—they seemed undetermined what to do. The air and the grass in front of the hive was full of bees. I donned the veil and lookt for the queen. After looking a considerable time I saw her crawling in front of the hive. Father at once went for a cage, and I watcht the queen, when all of a sudden she took wing and flew about 10 feet, and fell down into the high grass (in front of my bees is a meadow), and search as we would we found no traces of her.

After a time the swarm returned. They tried it again—twice—but every time returned. Being convinced that swarming was a failure, they went to work with a will, and produced for me 104 one-pound sections of honey. Therefore, you see what first was a failure proved later to be well, and taught at the same time the lesson that a colony strong in bees at the proper time is the thing, and, to secure a large yield, swarming should be prevented as much as possible.

One thing which gave me great pleasure was, early in the season, when I fed rye chop before any flowers bloomed. How they hurried and hustled, and workt! The dust settled on some, and they lookt like a lot of millers in miniature.

They would tumble and roll around like clowns, and they seemed to enjoy it as much as I did to look on.

I have read that some have trouble to start bees on the meal. I have had no trouble at all. The first time I fed I sprinkled a little honey on top of the meal, and afterwards they came without until pollen was to be had elsewhere, when the meal remained untoucht.

A very queer thing happened of which I have never read in the papers. During the latter part of August, in taking off supers, I put the escape on a certain hive, and in about 24 hours I went to take the super off, expecting it to be empty of bees, but it was the reverse. I waited another day, and still quite a number of bees were in the super. I thought that being late in the season was the cause of their not moving down. I then took the super and emptied it about 10 feet from the hive, brushing the bees off. Some fell to the ground, and others flew off and I thought no more about it.

The next day my father chanced to pass where I emptied the super, saw a small ball of bees there, and on brushing the bees apart he found the queen. We put her into a cage, opened the hive from which the super came, and let her run in, letting her take the consequences. The result was that in a week's time, on examination, we found her all right, with frames of eggs and brood, and I concluded the queen was not a jot the worse for her one day's leave from her prosperous and large family. Now the question arises in my mind, Why did the queen stay there and the bees cluster around her?

Lehigh Co., Pa.

Shall Everybody Keep Bees?—How it Works in Practice.

BY J. H. MARTIN.

"Hello, there! howdy do, neighbor Jones? Say, what d'ye think about them editors, parsons, and preffessors advising every rancher to keep bees? Wonder if they don't know there's too many bee-keepers now? And ain't the edge of the market all knockt off now on that account?"

"Wall, now, neighbor Spink, don't you worry about every rancher keeping bees. Them fellers have got to have something to write about, and so they take up the universal-everybody-bee-keeping brotherhood; it sounds well on paper, but how does it work in practice? You know old Toddlebottom over on the north fork of the Santa Ana river? Wall, he bought a dozzen skeps of bees of Jimmy Ricks, and ha! ha! He expected to load a bull car of honey the first year. But he didn't; oh, no. Yer see the season was agin him; it didn't rain; there was no honey, and his bees all seemed to be going to rack when somebody told him that he would have to feed his bees. Then he went around axing people the cheapest thing that he could feed. Jim Billcracker—you know Jim? Says he, 'Why, Mr. Toddlebottom, why don't you feed 'em on watermelons? You know that if you break open a melon how alfiredly the bees will work on it.'"

"That's so," says Toddlebottom, "haddent thought of that. Why, they dig out the hull inside of a melon in no time. But, Jim, who's got the watermelons?"

"Why," says Jim Billcracker, "I'v got a snag of them. Say, now, I'll sell you a whole wagon-load of them for two dollars; that orto feed your bees for a whole year."

"Toddlebottom accordingly fed his bees on cheap watermelon-juice, ha, ha! And what yer think, neighbor Spink?"

"Why, I think they all turned up stone dead."

"Yes, dead as a hammer."

"Then there is another case, neighbor Spink. Joe Windsucker, over on Hardscrabble Pint, he thought he'd keep bees, jest to git enough honey fur the family, yer know. He started in with 20 skeps, and sot them over by the corral. Everything went along quite lovely till one day they had some visitors, and Mrs. Windsucker, says she, 'Joe, you jest get some honey for dinner; it'll be so nice a treat for Sister Mehitable.'"

"So Joe put on a mosquito-netting vell, and drew onto his hands a pair of Mrs. Windsucker's long-legged stockings, and he went forth to get the honey."

"Joe had one of them cheap smokers, and in his hurry and excitement he didn't get up half a smoke; the bees got awful mad, and they stung Joe through the stockings, crawled up his trowsers, and stirred things up lively all around the ranch. Joe got his honey, but I tell yer that he was mighty glad to get into the house. He spent about an hour pulling out bee-stings and putting saleratus on the wounds. But the worst thing happened when Joe went out that evening to milk Dinah, the black cow. She was lying down sort of repeseful. 'Git up,' says Joe, giving her a kick. But Dinah didn't stir, and never did any more; her stripping days were ore. You see when Joe got out of the way the bees tackled Dinah."

"And she turned up stone dead, too?" quoth neighbor Spink.

"Dead as a hammer," said Jones. That episode cured Joe's bee-keeping. He sold the bees right off for half the amount he gave for them. He says he has a cowlicky feeling every time he sees bees or honey around."

"Then there was Cephas Flitchmyer, he——

"Well, well, neighbor Jones, that's enough. I won't be any further discouraged. Come to think of it I know of several cases akin to those you mention. The farmer, the widder, the widder's son, and the parson, nine times out of ten, will throw up the job. There was widder Spiletuses' son. I really thought he would make a dexterous bee-keeper with his nice little apry, but he all at once degenerated into a lawyer."

"Du, tell, neighbor Spink; what a pity. But don't you worry, everybody'll never keep bees."

"Ha, ha! Good-bye."

"Good-bye. Ha, ha!" Los Angeles Co., Calif.

A Number of Notes and Comments.

BY P. A. NEWCOMER.

I have been a bee-keeper for 17 years, but never went at it in earnest till seven years ago. I run for comb honey entirely, only using the extractor in case of emergencies and where some colonies are incined to loaf. This year I will run mostly for extracted honey.

I started in 1897 with 33 colonies, spring count, and increast to 57; got 1,500 one-pound sections, and extracted 300 or 400 pounds.

Our early white clover bloom was full of nectar, but after the first rain the flow was very light. I set the hives with a spirit-level, and give ½ inch or ¾ slant to the front. I have them 18 inches apart in rows, the row that runs north and south faces the east, the ones that runs east are set facing the northeast. That gives the morning sun and a good view from the house, as the apiary is west of the house.

One thing I have been bothered with is queenless colonies. Long after swarming-time, in the fall flow, I miss the queens. It has always been a mystery what becomes of them. I have made up my mind they enter the wrong hive from their wedding flight. If not, what is it?

I winter my bees in the cellar, and have lost only four colonies in seven years in that way; but the last two years they have had dysentery quite badly; also the past winter. I keep the room from 42° to 45°. I would like to hear the general causes of this disease described; or is it a disease? To-day, while in the bee-cellar, they were very uneasy. All wanting to fly out to empty themselves. I want to hear from Dr. Miller on this question.

I often read in the American Bee Journal about goldenrod honey. I have been told by the oldest bee-men in the State that the bees gather only pollen from it, and no nectar whatever. Is this so? If not, I want to know it. We have a 25-acre pasture full of it, and I never saw a bee on it—I mean the button or flat top—that is the variety they claim as the honey-plant.

A year ago a Des Moines gentleman and I rode 36 miles right through a golden-rod district, and not a bee did we see on it. But the sweet clover by the wayside swarmed with them.

So it is with alfalfa—not a particle of nectar in it here. We have sown and tried it with the bees, and also applied it to a glass, and not a bit of nectar did it contain. But in the Western States it proves a success.

I have always been told that heart's-ease honey is dark and heavy—sort of a spicy flavor—while I am also told that it is light, and has a smarty taste. I should like to send in a sample of each flora (or honey), and be informed as to the plant that produced each variety of honey.

I tell you, we can't educate ourselves too highly on this subject. When frauds and swindlers surround us on every hand, we must be able to stand by the truth (I mean honey) and battle to the end. I had a man in southern Kansas tell me last fall that manufactured honey was just as good as what bees produced. He said that God never did anything but what man excelled it. He could see no difference between genuine and imitation. Education did it. Let us educate our children differently, and may God speed the time.

Another singular thing is, so many try keeping bees without literature. They talk "gum" or "skep," and say they never read a bee-paper. I had a man undertake to tell a couple of us that he could tell every bit of honey, if it was from a young or old colony; he also said it was no use to use separators, as the honey was just as good, and what was bulged he could eat. One man said "honey is honey." "Yes, if it is ripe," said I.

"Ripe, ripe," he replied; "I kept bees 20 years and never heard of ripe!"

Now, how can a man talk to such a person?

Buena Vista Co., Iowa.

What is Bee-Poison?—Opinions Quoted.

BY D. S. HEFFRON.

EDITOR AMERICAN BEE JOURNAL:—In the number of your highly instructive journal, issued April 29, 1897, a rather facetious correspondent, who signed his habitat "South Africa," describes a personal "attack of toothache in the legs," and the remedy that he applied to produce an immediate cure. The writer of the article attributes the cure to formic acid, in which he possibly mistakes. Dr. Robert Kane, in his Chemistry, edited by Dr. Draper, page 645, says:

"The formic acid derives its name from existing in a very concentrated form in the common ant (formica rufa), and produces the pain of its sting on being injected into the puncture which the animal makes. It was formerly prepared by distilling the ants with a little water."

Dr. Kane says it is not necessary to distill ants, but if sugar, or starch, or barley, be simply heated with dilute sulphuric acid until it becomes brown, a certain quantity of formic acid is produced. Pure hydrated formic acid is a limpid, colorless liquid, which fumes slightly in the air; its odor is intensely pungent. In this most concentrated form it is an absolute caustic if applied to the skin, producing a sore very difficult to heal. And the formic acid burns and corrodes the skin after the manner of fluoric acid; it does not produce swelling as is generally the case with the poison of the bee's sting, which, tho containing formic acid, must contain an additional poison.

Under the heading, "The Poison of Bees," the Popular Science News (in its March, 1898, issue) remarks as follows:

"It is generally assumed that the poison of the bee is formic acid. Prof. Langler, however, finds that this is only partly true; the bee-poison which he examined was a bitter-tasting liquid with an agreeable odor, which, altho it contained formic acid, when diluted to a one per cent. solution, so that it no longer gave an acid reaction to litmus, still possest appreciable physiological action. Moreover, when kept at a temperature of 100° for over six weeks, so that all the formic acid was entirely volatilized, the liquid still produced hyperæmia of the conjunctiva when introduced into the sac."

Prof. Langler, a chemist, has isolated the active principle, which he finds gives alkaloidal reactions, is unaffected by heat or cold, or by acids. Injected into the veins of animals, it produces effects similar to the venom of serpents.

I suppose Dr. Miller would tell us that hyperæmia is a collection or effusion of blood in any portion of the body causing swelling, while the place, conjunctiva, is the outer covering of the eye and inner of the lid.

It is not a little remarkable that the poison of the bee contains mixt two dissimilar principles—one is formic acid, secreted by the ant, the other a distinct poison that seems commonly to cause swelling, and, so far as I know, it is not yet named. Cook Co., Ill.

Thinks He Has Discovered the Control of Sex.

BY C. THEILMANN.

Prof. Schenk, of Vienna, Austria, is reported as having discovered a way to regulate the process at will in the birth of a male or female. He says that he has left his secret under seal with the Scientific Academy, which can prove it, and then deliver it to the public. But he can give the results of his discovery and the scientific facts they rest on. The Professor says, further on, that his aim is the birth of males, and that he caused the production of males in 14 instances where his discovery was carried out according to his directions. The male has not the least influence, all lies on the female, but the treatment must be in advance of conception, and not after it. He has done this by proper nourishment of the female, etc.

Some readers will ask what this has to do with bee-keeping. For answer, I will say just this: If Prof. Schenk can regulate the sexes at will in the higher animals by proper food and nourishment, what should hinder the bees producing their different sexes at will by proper food and nourishment also?

My experiments convinced me years ago that bees can and will, if necessary, rear either of their sexes by way of food and nourishment, if newly-laid eggs are given them.

Some years ago, in swarming-time, I hived a big swarm of Cyprians which had a very prolific one-year-old queen. The colony went to work busily, but when I lookt into the hive the next morning it lookt as if half of the swarm went back to the old hive, and as I did not want any weak colonies for producing comb honey, I put another swarm in front of the Cyprians, after dosing them with diluted peppermint, as I knew their sensitive and fighting nature; but they would fight and kill the new swarm by the hundreds in spite of peppermint. I then dosed them again, and shook them off the frames in front of the hive with the new swarm, and dosed them the third time, so that they were all wet. By this time a number of other swarms came out, so I shut up the hive and attended to them, and swarming kept me busy all day until dusk.

The next morning I examined the Cyprians, and there was not a live bee there—Cyprians and swarm were gone. Two of the frames had two new combs built as big as a hand, all worker-cells, one of which was regularly occupied with an egg in each cell on both sides of the comb, and as far as the cells were built big enough; no egg was missing in any cell.

Immediately after examination a swarm issued, which was hived on these combs. The bees accepted their new home and workt vigorously.

About a week after I examined the hive and found it built full of drone-comb, except the two pieces that were built when they were hived. There were no eggs or brood, except sealed brood, in the piece where the eggs were, and here were three capt queen-cells, and about 25 drones in worker-cells scattered among the worker-brood. I am positive there were no drone-cells built in that piece of comb, and I am thoroughly convinced that those eggs were all intended for workers when laid by that regular, prolific Cyprian queen, that filled whole combs of workers without a miss in her old hive.

The swarm that was hived on this comb had undoubtedly lost their queen in swarming, and their instinct directed them to produce queens, drones and workers from the worker-eggs they had on hand, to save their existence. Some of our learned men will not accept this, but Prof. Schenk's discovery will bear me out on what I have said here, and years ago in the "Old Reliable."

By the way, did any bee-keeper ever see drone-comb built the first day of swarming with a young, prolific queen? or drone-brood reared the first two or three days after the swarms were hived? If there are any it would interest many of the readers to hear from them in the American Bee Journal.

Wabasha Co., Minn.

Bees in Relation to Flowers and Fruits.

BY THOS. WM. COWAN.

(Delivered at the University Farmers' Institute at Pacific Grove, Calif.)

[Continued from page 340.]

NECTAR.—We must now notice the part played by the nectaries in the process of fertilization. Altho we usually speak of bees gathering honey it is not strictly accurate, for the fluid secreted by the flower is unlike honey in many particulars, and is called nectar, while the part by which it is yielded is called a nectary. Chemical analysis has shown that the sugar nectar contains is identical with that of cane or beet root, while the sugar of honey is similar to that of the grape. To those who have studied the physiology of the honey-bee it will be known that bees, by means of a glandular secretion, convert the cane sugar into grape sugar, just like the saliva does in our own case.

Nectar from different flowers differs in aroma, which is imparted to the honey, and it is by this means that we are enabled to distinguish honey obtained from various sources. In flowers, nectar is usually furnisht abundantly in the morning, diminisht till the afternoon, and again increast towards evening. The position of the nectaries in flowers differs with the kind of insects to which they are suited, and while some lie almost on the surface, as in the blossoms of carrots, most are found in deeper recesses, because this position insures the insects coming well into contact with the male and female parts, and protects the nectar from injury by dilution with rain or dew. For the latter purpose we also find wonderful modifications, as, for instance, the drooping habits of the fuchsia, or the up-standing water-resisting hairs of the common nasturtium.

I have already mentioned that the sexes do not always exist in the same flower, nor always in the same plant, and even when they do the flowers are so modified as to prevent self-fertilization and secure cross-fertilization by insects. Many flowers in which both pistils and anthers are present prevent self-fertilization by maturing these organs one before the other, so that the two sexes are never present at the same time in one flower. When the anthers ripen first the plants are called *proterandrous.*

If we examine a nasturtium flower we find the nectar secreted in a long spur. When the flower first opens the style is short and the stigma immature; the anthers are also unripe, but they soon begin to rise so as to stand in a position, when ripe, that a bee entering in search of the nectar cannot fail to get dusted on the breast with pollen. The anthers mature one after the other, the process occupying from three to seven days, during which time the flower is in function only male, altho carrying both sexes in the anthers and pistil. The anthers now begin to fade and drop off, but the style has grown longer, and the pistil with the stigma adhesive and receptive now assumes the position occupied by the anthers, the flower becoming henceforward female. In this way a bee going from flower to flower with well-powdered breast carries the pollen from the younger to the older blossom, and produces cross-fertilization, the only one possible, as the two genders do not co-exist. It will also be seen that the lower petals are cut along their edges into narrow strips which are turned up so as to prevent water reaching the nectary. Then looking at the petals we find lines which really act as guides, pointing towards the nectary.

There is another class of plants called *proterogenous*, in which the pistils mature before the anthers.

We may take figwort as a representative. Here we find, as soon as the corolla opens, the stigma, already receptive, is arranged immediately over the front lip, just in the right position for bees coming from older blossoms to deposit the pollen they carry on their breasts as they reach after the nectar. Fertilization having been accomplisht the stigma shrinks and dies, while the anthers, previously curled and hidden, rise and take its place. Most flowers are provided with contrivances so that the nectar can only be reacht in a certain position, and in the figwort we find the back petal standing at such a height as to prevent the bee getting at the nectar from that side and compelling her to come in contact with the anthers and stigma.

Nature's resources to produce cross-fertilization are endless. For instance, we find in the willow-herb that when the flower first opens the style curves backwards and remains in this position until all the anthers have shed their pollen, and only then does it straighten and spread its four stigmatic surfaces—which up to this time had been closed—just in the right position to receive the pollen brought by the bee.

Then we have another class of plants in which the genders appear on different parts of the same plant, and these are called *monœscious.* Squashes, cucumbers and melons are examples of such plants, and when the last two are cultivated under glass, and bees are excluded, the operation of "fertilizing," or "setting," must be undertaken by the gardener. In *diœscious* plants the genders are placed on different plants. This was known even to Herodotus, who describes the process of "caprification"—the transference of pollen from the male blossom of one tree to the female blossom of another—by which dates in Egypt are insured. Being in Tunis one April, I witnest this operation, and admired the skillful manner in which the Arabs climed the bare stems of the date palms. Amongst plants of this class we find box-elder, persimmon, and many varieties of strawberries.

We have another class of plants in which the blossoms become practically *diœscious* by differentiating into two or even three forms. In the primrose or flax we find flowers having long and short styles. Those with long styles have the anthers placed half way down the corolla-tube, while in those with the short styles the anthers are placed at the throat, just in the position occupied by the stigma in the long-styled form. It is evident that if a bee visits the long-styled form, her tongue, protuded to reach the nectar, will get dusted with pollen upon the center, and, in passing to the short-styled form, will deposit the pollen on the stigma. Darwin found that the best seed and the largest quantity could only be produced by crossing the different forms. He also found that the pollen differed in size, and that grown from a different form of blossom was prepotent. Occasionally plants present three forms, as, for instance, in the purple loosestrife (*Lythrum salicaria*). Here we have flowers on different plants, with long, medium, and short styles and stamens. We find the long pistil is fertilized by the long stamens of the other two forms, the medium by the medium, and the short by the short, so that, as bees pass from plant to plant, the pollen finds its proper resting place.

No order of plants contain more that are useful to the farmer than the *Leguminosæ*, which all have an irregular corolla, adapted to insect fertilization. Amongst these we find peas, beans, alfalfa, clovers, sainfoin, vetches and many others. So dependent is this order on insect visits, that Darwin found that in 100 heads of common purple clover (*Trifolium pratense*) protected not a seed was produced, while 100 heads visited by insects produced 2,720 seeds. Similar results were obtained with white clover. In New Zealand, I recollect, some years ago, owing to their being no bumblebees—the special fertilizers of this species—no seed could be obtained from purple clover, and it had to be imported every year from England until these bees were introduced from the old country.

In the sage family we find some curious modifications to insure cross-fertilization, and in the order *cruciferæ*, which includes cabbage, turnip, radish and mustard, we find the anthers in the young blossom face the style; but before they ripen they turn their backs and shed their pollen, which is thus in the most unlikely position to come in contact with the stigma, but is most favorably situated for adhering to insects.

[Concluded next week]

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Killing Off Drones.

Why are my drones being killed off at this time of the year—May 26? We are having considerable rain this spring, and perhaps that may, to a certain extent, have something to do with it. I don't know. CONNECTICUT.

ANSWER.—A very rainy time, or scarcity of pasturage from any other cause, would be sufficient reason. Sometimes a colony that has just reared a young queen will kill off its drones when they are left undisturbed in other colonies.

Making Wax Sheets for Foundation.

How are wax sheets made ready for the foundation machine? MINNESOTA.

ANSWER.—Make a dipping-board of straight-grained pine lumber; soak a few hours in water that has a teacup of salt to three pails of water; dip quickly in wax at about 165°, then dip into cold water. When sufficiently cooled scrape the edge of the board with a knife, then peel off the sheet. If you want a heavier sheet dip a second time. To make heavy brood foundation you will need as many as five dips. It takes practice and skill to make a successful job.

Questions About Swarms.

1. When is the proper time to put supers on new swarms—when they are first hived, or afterward?

2. Why is it better to leave the old swarm close to the new one a week before moving it to a new stand?

3. If a swarm runs away do they know where they are going to when they start? QUERIST.

ANSWERS.—1. That depends. If the supers contain sections with starters that have never been toucht by bees, you can put them on as soon as the swarm is hived. But if the brood-chamber in which the bees are hived contains only starters or sheets of foundation, and the super is one upon which bees have already workt, then there is danger that the queen will go up into the super and lay, unless you wait a day or two for the bees to make a start in the brood-chamber, or unless you have a queen-excluder between the brood-chamber and super. If the super contains extracting-combs, it will not do at all to put it on at once, and hardly later without an excluder.

2. The old hive is left close to the swarm and moved a week later so that the field-bees from the old hive will return to the swarm, making the swarm stronger for super work, and weakening the mother colony so much that it will not swarm again. If you move the old hive away to a new place at the time of hiving the swarm, you will fail of getting this accession to the swarm, and a second swarm may be thrown off, if

not a third and fourth. If you wish after-swarms, by all means set the mother colony in a new place at the time of hiving the swarm.

3. Sometimes they may start without knowing their destination, but it is supposed that they generally send out scouts and know their destination. If you have hives standing full of combs without bees, you may often see a small squad of bees busily engaged in cleaning out such hives. These are scout bees, and, if not prevented, a swarm of bees will be found to occupy such hive within a few days.

Space Between Super and Frames.

I have some dovetailed hives with section-holders, etc. There is nothing to hold the section-holders up from the frames in the hive except the follower and wedge, which seems to me to be insufficient. If they are allowed to rest directly on the frames the bee-spaces do not correspond in but a few places. How shall I manage them? IOWA.

Answer.—Possibly you may have overlookt the little strips of tin that are to be nailed on the bottom of each end of the super. These hold up the section-holders.

Swarm in Shade-Tree—Sweet Clover.

1. How can I get swarms out of a shade-tree near the house without cutting the limbs when they are clustered among the thick limbs?

2. Will robber-bees kill the queen in a hive they are trying to rob?

3. Will it pay to plant sweet clover for bee-pasture in this part of the country, on rocky upland that is not valuable for farming? ARKANSAS.

Answers.—1. Of course, if too many limbs are not under them they can be shaken down, but probably you mean when that is not practicable. You may be able to set a hive over them and have them run into it, or you may have them run into a box or a basket. You may take a frame with some brood in it, hold it over the swarm or close beside it, and have the bees run on that.

2. As a rule, robbers will not kill a queen. A queen may be left in a hive with a few bees after all the honey and most of the bees are gone. But bees "do nothing invariably."

3. In all probability it would pay well, and the experiment would cost little. Try to have the seed well trampt in, either in fall or early spring.

A Beginner's Questions.

1. Do cool nights have any effect on the honey-flow?

2. How are drones produced? Does the queen-bee lay the drone-eggs, or are they laid by laying workers?

3. I have 10 colonies in standard frame hives. They are hybrid bees, are good workers, but very cross. My apiary is located in town, and people are complaining of being stung by them. Would it be well for me to stock my apiary with 5-banded Italians? Are these as profitable and gentle as 3-banded Italians?

4. How is the bee-escape used on a super containing one-pound sections?

5. Reading over your list of answers to queries this week, I noticed where you said that queen-cells were generally prepared and well advanced before a swarm issues. I was always of the opinion that before a swarm issues a young queen was hatcht. If this is not always true. I suspect I did wrong the other day, just after a colony had swarmed. I lookt through the brood-chamber to cut out queen-cells in order to prevent after-swarms. I lookt first for the young queen, but not being able to find her, I just believed she was there any way, so I cut out six (all there were) well advanced queen-cells. None of these were capt nor none were empty. Should'nt I have left one of the largest cells? I didn't, tho, and I suppose the bees will have to rear another queen before they do anything farther. The colony seems to send out scarcely any workers. What is the cause?

6. Would it be safe for me to put poison on potatoes which are right in front of my apiary? SOUTHERN INDIANA.

Answers.—1. Yes, temperature has much to do with honey-flow.

2. In a normal colony the queen lays the eggs that produce drones. When laying workers are present, then drones only will be reared.

3. Some say 5-banded Italians are very gentle, others say not. They are probably not all alike. Either 3-banded or 5-banded bees will probably be an improvement, both as to temper and profit.

4. The usual way is probably to raise the super, put the escape on the hive or remaining supers, replace the filled super and leave till next day, or till the super is cleared of bees.

5. You are probably correct in thinking that the bees will have to start afresh to rear a queen, delaying the laying a number of days. One reason the bees do not fly much is because so many of the field-bees went with the swarm.

6. Probably as safe right in front of the hive as if a quarter of a mile away. It's hardly likely any harm can come, unless it should happen that the bees were getting water or dew from the potatoes, a thing that doesn't happen very often.

Management of Swarms.

1. What would the result be if I should put a new swarm into an old hive from which a swarm had issued a day or two before, first placing the old hive on the stand that the new swarm came from, cutting out all queen-cells, and giving plenty of surplus room? Would I get more surplus honey this way than if hived separately?

2. After a swarm issues and is hived on the old stand, would it be all right to put a bee-trap on the old hive, placing the hive close beside the new, and leave the trap on six or seven days, then take the hive away? Or would it produce a case of foul brood by excluding all bees carrying pollen?

3. Would you put on supers this early (two or three weeks before clover bloom) if the bees hang out for want of room, and some swarm? WISCONSIN.

Answers.—1. If I remember correctly the plan has been tried, sometimes working all right, in other cases the bees swarming shortly. If the bees should not swarm you might get more surplus.

2. It would work all right, probably, but I don't see any difference (I suppose you mean queen-trap) the trap would make, for no young queen would likely be ready to leave the hive in that time. Lack of pollen would hardly occur, and if it did it would not cause foul brood.

3. If bees are hanging out and swarming for want of room, I surely would want to give them room, but before clover bloom it might be better to give them room by setting an additional brood-chamber under. But a super will be better than to have them crowded.

Wintering—Putting on Supers—Colony Hanging Out—Adel Bees, Etc.

1. In our crates of dovetailed, 8-frame supers, we find a package of five or six pieces which look like sections, but have no grooves where the corners of the sections would come. I find no such thing in the supers. Can you tell me the use of them?

2. Is it safe to winter bees out-doors in 8-frame hives?

3. When should supers be placed on the hives? Should they be put on when the first white clover blossoms appear, or not until it blooms in profusion and yields considerable honey?

4. I have a colony that hangs out on swarm-days, covering the front and sometimes part of the sides of the hive. If I divide them, putting their queen into the new hive (and leaving them unsealed brood,) about how many days will it be before they will rear another queen? Or would you enlarge the entrance? It is small, only about ⅛x4 inches.

5. Do you consider the Adels superior to the Italians? Are they practically non-stinging and non-swarming, and as good honey-gatherers as the Italians?

6. Would bees store more comb-honey in a hive containing more than eight frames, after the first year? Would they not be a much larger colony?

7. In the old frames, where you use your fingers to space them, can the bees be prevented from building comb across from one to the other? ILLINOIS.

Answer.—1. Probably the bottom-bars of section-holders.

2. Not in Northern Illinois without protection.

3. Usually about 10 days after the very first clover blossom is seen by one who is on a sharp lookout. I saw the first blossom May 22, this year, and as you are in about the same latitude, that would make June 1 about the right time. The usual rule is to put on supers when you find the bees putting bits of white wax along the upper part of the brood-combs. A pretty safe rule if you wait till clover blooms, for sometimes such bits of wax will be found in fruit-bloom.

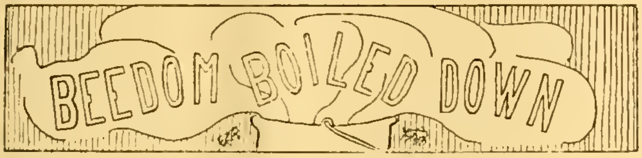
4. A new queen will probably leave her cell in about 12

days after the bees are left queenless, providing no queen-cells were started previous to the division. Most surely I would enlarge that entrance, if necessary making it extend the whole size of the hive and an inch deep.

5. I never had any Adels. You're not likely to find bees that are non-stinging or non-swarming.

6. If you limit the brood-chamber to eight frames, you will hardly have as many bees as with more frames, providing your queen is prolific. A stronger colony ought to store more honey. Some who use 8-frame hives use two stories up to the time of putting on supers.

7. No; and if you succeed perfectly with any kind of frame be sure to let us know.



Wormwood to Prevent Stings.—In Muenchener Bztg., it is recommended to rub wormwood on the hands to prevent bees stinging.

Variety of Hives in Germany.—"Nowhere in the world," says Carl Krueger, in Brasilianische Bienenpflege, "is there so great a variety of hives as in Germany. Some open at the side, some at the top, some at the bottom, and some both at top and bottom.

That Big Texas Yield.—O. O. Poppleton says much has been said about B. F. Carroll's 1,000-pound yield, but he thinks the fact is often overlookt that this yield was from a colony *and its increase*. He says it would have been only play to have done that in his locality with any of the very best colonies in 1894.—American Bee-Keeper.

Old Combs for Brood.—Editor Hill, of the American Bee-Keeper, had a case in which bees under size were reared in comb 20 years old. He was inclined to believe it would not do to leave combs after so many years' use. Later he transferred combs from a box-hive that had been continuously occupied for 60 years, and the bees were full size. He concluded the first case was the exception, and that the bee-keeper could safely leave to the bees the matter of renewing combs.

Apis Dorsata.—Upon the invitation of the Chairman, Mr. Haviland narrated his personal experience with bees in India, especially with regard to Apis dorsata. The worker of that species, he said, was as large as an English queen. The queen has a very large thorax, much larger than the worker. He thought, from the habits of those bees, there would be no possibility of domesticating them. They always establisht their home in the open, building their combs either on the boughs of trees high up in the jungle, or on the rocks. Bears were very fond of honey, and being good bee-hunters, climbed boldly up the trees for it; and the object of the Apis dorsata bee apparently was to build their combs where bears could not reach them. It was obvious that building as they did in the open air, they would be unable to stand a cold climate, and any attempt to introduce them to one would be sure to fail.

These bees also readily deserted their nests when disturbed, but that occurred in India even with bees that could be induced to build in a hive. But it was far more difficult to restrain the Apis dorsata, as he had himself proved by experiment, and unless the queen's wings were clipt she would probably be lost.

In their natural habitat the Apis dorsata build combs 5 or 6 feet in length and 2 or 3 feet in depth. The natives know the kind of trees and rocks where they may be found, and it is no uncommon thing—after an hour's climb—to find bears' "tracks" in the same direction. These bees migrate according to the honey-flow. When the honey is there, and the natives (who, like the bears, are expert tree-climbers) want to take it, they go after dark, and, with the aid of a torch, cut down the combs. They always ate the larvæ or grubs, which they relish far better than the honey. In fact, they usually sold the honey and wax if they could find a buyer.

Askt as to the effect of being stung by this bee, Mr. Haviland said fortunately he was never stung by them, but there was no doubt their sting was very severe; and as the whole of the comb was exposed in the open air any victim of their wrath would be attackt not merely by two or three bees, but by the whole colony. He did not think there was the slightest possibility of crossing them with European bees. The latter were closely allied to a species found in Northern India, and yet these never crost with Apis dorsata.

Mr. Sladen exhibited specimens of Apis dorsata, Apis indica, and many other kinds of bees collected by him during a recent visit to India, which were past around the audience and examined with much interest. He also showed a piece of comb and cappings of brood of Apis florea.

Mr. Weston observed that there must be parts of the Southern States of America where the objection on the ground of cold climate did not exist.

Mr. Carr and Mr. Haviland said that the principal obstacle to domestication and crossing was the habits of the Apis dorsata, not the climate.

Mr. Sladen, while in India, went to Darjeeling and saw some ligurians there, but he never heard of a cross having been effected. He believed that a cross might be obtained with the Himalayan bee, but did not think it possible with Apis dorsata. He saw 40 or 50 colonies of black Himalayans at the goal at Darjeeling. The honey-extractor was in use there, and the whole business was lookt after by the prisoners. They use wooden frames for the combs, and generally keep the bees on the modern system. He intended to bring some bees home from India, and started with three colonies of Himalayans from Calcutta; but, before reaching England, two had died, and in the third the bees had dwindled so much that it was useless as an effective colony. He therefore united the queen with a home colony, but she was killed by the British bees, and so his importation came to naught. He did not think it possible or desirable that Apis dorsata should be crost with English bees, for several reasons. He was particularly struck when catching Apis dorsata on the wing, with the heaviness of its flight. It flew very much like a drone, flapping its wings comparatively slowly, and making considerable noise. It was also slow in its general movements, and would settle on a leaf to rest, as it were, besides visiting flowers in a heavy and lackadaisical manner. Apis indica, on the other hand, was very similar to European bees.—British Bee Journal.

Department of Criticism is a heading that stands on page 150 of Bee-Keepers' Review, the department to be hereafter a regular feature of Review, conducted by Hon. R. L. Taylor. So far as can be judged from one number, the department is somewhat limited in scope, excluding what appears in the columns of the Review, and from the other bee-journals excluding all that should receive favorable criticism. In other words, Mr. Taylor confines his efforts to correcting mistakes found in other bee-journals. He thinks Mr. Aspinwall is wrong (page 148) in thinking there is danger that beeswax will be unwittingly adulterated with propolis, as propolis is much heavier than wax and melts at a much higher temperature. Takes the editor of the American Bee Journal to task for being severe (page 168) against the use of the word "hive" for "colony," and promises not to be harsh himself—unless with editors. Thinks the plan given (page 182) for fastening foundation in brood-frames by means of a saw-kerf in the top-bar too slow, and prefers the old-fashioned way of running on melted wax and rosin with a spoon. Thinks Dr. Miller is wrong (page 123) in thinking a queen thrusts her sting in the spiracle of another queen. Thinks same man wrong (page 149) in saying bees can stand confinement from Nov. 15, if they have a good flight at that time. Seems to be some mistake in reference, as page 149 is wholly occupied with report of Michigan Convention, and it is just possible there is some mistake as to such a statement being made without qualifications. Mr. Taylor objects to the advice given on page 183, to stir up a colony that will not fly when warm enough, possibly overlooking the point that a foot of sawdust packing lies between the colony and the outside air.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Telling Your Experience in the apiary is always interesting to a listener—or reader. One reason why discussions are so entertaining in conventions is on account of the fact that often much will be drawn out of bee-keepers who are present, who would likely never write out what they know. But there are many excellent bee-keepers who never attend conventions, and hence they keep themselves "bottled up," as it were, and unless they begin to put on paper some of their valuable experience, their apiarian knowledge will surely die with them.

Now, the object of this item is to invite all who feel that they can contribute something to the general fund of apicultural information, to write out their ideas and send them in for publication. For the next few months our columns will not be quite so crowded as during the past six months, so there will be good opportunity to place on permanent record much that were it not for this invitation might never be placed before those who are looking for all the information about bees that they can find.

◆

Mr. Cowan's Visit to Chicago.—During Mr. Cowan's visit here we had the great pleasure of getting somewhat acquainted with him; also with his good wife who accompanied him. They had been spending the past nearly 18 months with their son in California, and were so delighted with their residence there that they anticipate returning next fall to spend the winter.

Mr. L. Kreutzinger and the writer engaged a two-seated carriage, and on Thursday afternoon (May 2—a most perfect day) we took Mr. and Mrs. Cowan for a ride over the north side of the city. We called at the city water works first, then drove through beautiful Lincoln Park, which was just beginning to dress up in its lovely spring green.

After taking in the Park, we drove on up the famous Sheridan Drive, as far as Ravenswood, where Mr. Kreutzinger and the writer reside—only a few blocks apart. We stopt a short time at both places, so that our wives also might have the pleasure of meeting our distinguisht guests.

We then drove over to Mr. Kreutzinger's main apiary, where he has about 100 colonies of bees, with Mr. J. T. Hammersmark in charge. We remained there an hour or so inspecting the many new things Mr. K. had prepared for his bees. The apiary this year will have an entirely changed appearance, and with an experienced hand at the helm, in the person of Mr. Hammersmark, we shall expect great things.

The first swarm of the season had issued that day, and was safely taken from the tree upon which it settled.

We must not fail to mention the honey-house, workshop, bee-cellar, etc., that Mr. Kreutzinger has erected in his apiary. The cellar was supposed to be water-proof, but at one or two places it failed to be so the past winter, consequently about 70 colonies were treated to a severe bath, resulting in their total loss. There was perhaps a foot of water still in the cellar the day we were there.

On top of the house is built a cupola or observatory, with stands on which to place colonies of bees in glass hives for observation and experimental purposes. Mr. Kreutzinger is now getting together several varieties of bees to place in his observatory.

In this house is a honey-room, a room in which to fumigate combs, a workroom, bedroom for the manager of the apiary, and on the second floor a large place to store the necessary stock. We hope soon to have a new picture of this up-to-date Chicago apiary.

Well, after inspecting all these things, the return drive of some miles was begun. It was, to us, a very delightful afternoon, giving fine opportunity to visit with Mr. and Mrs. Cowan, who are charming conversationalists, having traveled extensively, and being so highly cultured. Mr. Cowan speaks five different languages, and reads eleven. He possesses undoubtedly the largest library of apiarian literature in the world, containing over 1,000 volumes. Mr. Cowan showed us a small index of the works, which he carries with him. We had the pleasure of adding at least three new volumes to that great library, even if they were small; one of them was Mr. Egger's latest German book.

Mr. Cowan has been for 25 years chairman of the British Bee-Keepers' Association; is the author of a bee-book which has a regular sale of about 5,000 copies annually—now in its 40th thousand, we believe; and as is well known, he is also the editor of the weekly British Bee Journal, which he owns and runs wholly in the interest of the Association of which he is chairman.

Mr. and Mrs. Cowan expect to sail for England from New York June 11. We wish them a safe and happy voyage, and trust that we shall again be favored by their presence in Chicago next fall when on their way to the sunset clime.

◆

Crimson Clover Honey.—Some time ago Mr. T. H. Sherman, of Richmond Co., Ga., enquired as to the quality of crimson clover honey. Dr. Miller replied as usual with his "I don't know," and askt Mr. Sherman to find out for himself and report, which he has kindly done, as follows:

EDITOR AMERICAN BEE JOURNAL:—I send you a small vial containing a sample of crimson clover honey. There is no doubt as to this being from crimson clover, as there was nearly 200 acres of it in my immediate vicinity, and the bees swarmed on it when in blossom, and ceast gathering the day after the clover was cut.

There will be an increast acreage every year of this plant in this section, as it has just commenced to be appreciated as a forage-plant. The fields when in full blossom present a lovely picture; one field of 100 acres, as level as a table, with clover as high as a man's knees, lookt like a great crimson carpet on the field, and the bees were working on it about one to the square foot.

The cold winds of April held my bees back, and when the weather settled every colony I had swarmed, so my honey crop will be very short, but as this honey sells itself at a good price, I will realize about as much as some of the bee-keepers who are not so fortunate as to be in a clover neighborhood. Almost all the honey put on this market is poplar, and after one gets a taste of clover honey, no more red honey for him.

I think the flavor of this honey could not well be improved upon. Please advise what your opinion of it is.

All my bees are strong, and will go into winter quarters with good queens. I am gradually Italianizing my apiary.

Yours truly. T. H. Sherman.

The sample of crimson clover honey was duly received, and we can pronounce it exceedingly fine in flavor, tho not quite so heavy in body as some honey. Crimson clover honey, like the honey from any of the other clovers, is all right. And Mr. Sherman should be able to harvest lots of it with such extensive fields of crimson clover growing in his vicinity.

◆

Relation of Bees to Horticulture—the able paper prepared by Hon. R. L. Taylor for the Buffalo convention of last year—we find is copied entire in the 40th Annual Report of the Missouri Horticultural Society, which has just come to our desk. It was read at their winter meeting by J. W. Rouse, a prominent bee-keeper and apiarian writer in that State. It was a wise thing to do. More of the State horticultural organizations ought to do the same thing. It contains just such information as horticulturists should know concerning the value of bees in the pollination of fruit-blossoms, and it also answers many interesting questions that often arise on the subject.

◆

Honey-Recipes.—Mrs. R. C. Aikin—the good wife of the President of the Colorado Bee-Keepers' Association—sent the following recipes to Gleanings:

Cherries Canned in Honey.—Five pints stoned cherries and one pint extracted honey. This makes 1½ quarts.

Gooseberries Canned in Honey.—Four pints gooseberries and 2 pints of cold water. Cook slowly until partly done, then add 1½ pints of extracted honey, and cook until done.

Honey Nut-Candy.—Use the recipe given in [Honey as Food] honey-leaflet for honey-caramels, cooking till it hardens in cold water, then pour over nut-meats. When cold, break in pieces.

◆

Grand Rush for Bee-Supplies.—In a notice being sent out to its customers by one of the large bee-supply firms, we find the following, which will serve as a sample of the busy times now upon the manufacturers of apiarian goods:

We have been running our factory day and night since March 1, working a force of about 250 people (all we can make room for). We are turning out 500 to 600 hives, 80,000 to 100,000 sections, and 1,000 pounds of foundation every day, and other goods in like proportion. Shipments aggregate 1½ to 2 carloads in weight every day. We have bought 10 carloads of two other factories to help us keep pace with our orders, but all the other factories are behind as well as we; and, from all the data we can gather, the demand for bee-keepers' supplies seems to be double that of any previous year.

You may say we ought to have been better prepared; but reflect a little, and think what it means to provide for such an unexpected increase. If we were not shipping constantly we should, in less than a month's time, fill up all our available storage capacity, manufacturing at the present rate. Unless more bee-keepers and dealers are more forehanded, and order early in the fall and winter what they are likely to need, such times as we are having now cannot well be avoided in such seasons as this by any amount of preparation by the manufacturers.

We expect to put in a 500 horse-power engine, and build an addition to our wood-working factory nearly twice the size of the present one, and will do our part in getting ready for another year; but that does not help us much for the present. If you cannot wait your turn to have you order filled, let us know at once and we will cheerfully cancel it and return the money you have sent with it. If we knew where to refer you, where you could get more prompt service, we would gladly do that; but (as far as we can learn) all factories are behind.

It is hard to discover the reason for such an increast demand for bee-supplies, unless it is that old bee-keepers are extending their apiaries, and new recruits are entering the ranks, as a result of the large honey crop of 1897. Perhaps there are other causes. But there is no time to hunt them up now. It's "busy as bees," and then fall behind in the work.

◆

Honey Ginger Cookies.—A correspondent of the British Bee Journal sent in a recipe for publication, and also a sample cooky, upon which the editor of that paper remarkt: "After tasting the sample forwarded, we have no hesitation in saying they are by far the nicest honey-cakes we have yet tasted." The recipe reads thus:

Flour, 1¼ lbs.; honey, 1 lb., warmed; cane sugar, 2 oz.; butter, ¼ lb.; ground ginger, 1 oz.; candied peel, 1 oz.; one good teaspoonful of bicarbonate of soda dissolved in a little lukewarm milk. Rub the butter into the flour, add the sugar, ginger, and candied peel (chopt fine); then add the honey, and last of all the bicarbonate of soda, mixt with enough lukewarm milk to make the mixture into a rather stiff paste. Roll out, cut into shapes with a small glass, and bake on a tin sheet in a quick oven.

THE WEEKLY BUDGET

Editor Leahy, in the Progressive Bee-Keeper for May, tells about his visit to the home and apiary of Mr. G. M. Doolittle, of New York, last fall. It makes us want to go there, too.

Rev. A. B. Mettler, of Will Co., Ill., dropt into our office last week one day. He's one of the preachers who find that Methodist preaching and bees mix very well. But all other kinds of good gospel preaching ought to mix with bees just as well as the Methodist brand.

Elder Daniel Whitmer, of St. Joseph Co., Ind., made us a very pleasant call last week. He has about 100 colonies, and reported the prospects good. We shall expect to hear from Elder Whitmer through his pen. He has been a reader of the American Bee Journal about 20 years. Evidently likes it.

Mr. W. T. Richardson, of Ventura, Co., Calif., after disposing of his 60-ton crop of honey, and finding that he would get no honey this year, has gone East, accompanied by his wife. He will spend several months with friends in the New England States. Mr. Richardson is not enjoying good health; and it is hoped that the journey and the rest from the busy cares of a busy life will have a beneficial effect.—Gleanings.

Mr. J. H. Martin, in Gleanings, mentions the establishment of a "joke department" in the bee-papers. If that funny thing is ever done we will name Mr. Martin for the position as editor. One of the jokes he calls attention to, is the one about Mr. Wilkin's "fire-proof, concreted cistern" in which he stores his extracted honey. Of course, everybody thought Mr. Wilkin just poured the honey into the cistern and pumpt it out as sold. Instead of so doing, he first put the honey "in five-gallon tin cans and in the good old orderly orthodox way." So much for the California "honey-cistern."

Mr. J. W. Oglesby, of Logan Co., Ark., when renewing his subscription May 23, said:

"Enclosed find the ever needful to pay for the 'ever needful' to all bee-keepers. I don't know but what I get my money's worth out of the 'Contributed Articles,' if no other way—at least in the consolation that I am not the only ignorant 'cuss' that is trying to keep bees.

"It does seem to me that Dr. Miller is the modern 'Job' for patience. What simple questions are sometimes askt. Why don't they get a book and study some? Well, 'let her go;' if he can stand it, so much the better for the rest of us fools, for where we don't learn something we get a good laugh at the other fellow's ignorance; but I must say that I usually learn something. I read that department first.

"My bees came through all right on the summer stands. No loss. I have had 4 swarms. I have now 22 colonies in dovetailed hives, and all extra-strong.

"Do soldiers eat honey? May be we may find the market somewhat better on account of the war. But for my part it makes no difference, as I have a home market for all I can produce."

Yes, sir, we are quite sure soldiers eat honey—*when they can get it!* We think that they ought to be furnisht honey in their bill of fare, just as well as beans, hard-tack, etc. It would help to sweeten them up, and make them feel more like defending a country that can produce the delicious honey that this can.

PRESIDENT McKINLEY is to be given the unique distinction of having a number of a woman's magazine named for him and prepared in his honor. The July issue of The Ladies' Home Journal is to be called "The President's Number." It will show the President on horseback on the cover, with the President's new "fighting flag" flying over him; a new march by Victor Herbert is called "The President's March;" the State Department has allowed the magazine to make a direct photograph of the original parchment of the Declaration of Independence, while the President's own friends and intimates have combined to tell some 20 new and unpublisht stories and anecdotes about him which will show him in a manner not before done. The cover will be printed in the National colors. For $1.80 we will send the American Bee Journal and The Ladies' Home Journal one year.

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for $1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at $1.00), and 10 cents extra.

◆

The Wood Binder for holding a year's numbers of American Bee Journal, we propose to mail, postpaid, to every subscriber who sends to us 20 cents. It is a very simple arrangement. Full printed directions accompany each Binder. Every reader should get it, and preserve the copies of the Bee Journal as fast as they are received. They are invaluable for reference, and at the low price of the Binder you can afford to get it yearly.

◆

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

◆

The Names and Addresses of all your bee-friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums we are offering. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.

◆

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

◆

☞ See "Bee-Keeper's Guide" offer on page 365.

FOR THE READERS OF THE AMERICAN BEE JOURNAL.

PROFITABLE BEE-KEEPING,

—WITH—

HINTS TO BEGINNERS……

By Mr. C. N. White, of England,

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

Mr. White is owner of one of the largest apiaries in the country where he lives, and has made a life study of the subject. He is also lecturer, under the Technical Education Scheme, to several County Councils in England. He will treat the subject in a

Series of Nine Illustrated Articles:

1. General and Introductory.
2. Bees.
3. Handling Bees.
4. Swarming.
5. Hives.
6. Foundation.
7. Supering.
8. Diseases.
9. Wintering

This will be a series of practical articles that bee-keepers of the United States will not want to miss reading. They are copyrighted by Mr. White, and will appear only in the AMERICAN BEE JOURNAL.

We want our present readers to begin at once to get their neighbor bee-keepers to subscribe for the Bee Journal for the last six months of 1898, and thus read the articles by Mr. White. In order that all may be able to take advantage of this rare opportunity to learn from a successful and practical English authority on bee-keeping, we will send the American Bee Journal for

The balance of 1898 for only 40 cents—
To a NEW Subscriber—thus making it

SIX MONTHS FOR ONLY FORTY CENTS—

Which can be sent in stamps or silver. If you are a subscriber already, show the offer to your bee-keeping neighbors, or get their subscriptions, and we will give YOU, for your trouble, your choice of ONE of the following list, for each NEW 40-cent subscriber you send:

For Sending ONE New 40-cent Subscriber:

1 Wood Binder for a Year's Bee Journals
2 Queen-Clipping Device
3 Handbook of Health—Dr. Foote
4 Poultry for Market—Fan. Field
5 Turkeys for Market—Fan Field
6 Our Poultry Doctor—Fan Field
7 Capons and Caponizing—Field
8 Kendall's Horse-Book
9 Mullen's Horse-Book
10 Foul Brood—by Dr. Howard
11 Silo and Silage—by Prof. Cook
12 Foul Brood Treatment—by Prof. Cheshire
13 Foul Brood—by A. R. Kohnke
14 Muth's Practical Hints to Bee-Keepers
15 20 "Honey as Food" Pamphlets
16 Rural Life

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1 Potato Culture—by T. B. Terry
2 Green's Four Books
3 Ropp's Commercial Calculator
4 Dr. Tinker's Bee-Keeping for Profit
5 40 "Honey as Food" Pamphlets
6 Winter Problem in Bee-Keeping—by Pierce
7 Hutchinson's "Advanced Bee-Culture
8 Dr Brown's "Bee-Keeping for Beginners"
9 Bienen-Kultur—German
10 Bees and Honey—160 pages—by Newman
11 People's Atlas of the World

Please remember that all the above premiums are offered **only** to those who are now subscribers, and who will send in new ones. A new subscriber at 40 cents cannot also claim a premium; but we will begin the subscription just as soon as it is sent in, which will secure several June numbers in addition to the last 6 months of this year, provided the subscription is forwarded to us **at once.**

If you want your bee-keeping neighbors to be CERTAIN of getting ALL the numbers of the last 6 months of 1898, you had better get their subscriptions in **before July 1,** as we may run out of copies before the end of that month.

Now, let every one go to work, and help roll up the largest list of subscribers the old American Bee Journal ever had. It can easily be done if ALL who possibly can get a few new subscribers will kindly do so.

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

"A Queenly Deceiver."

"He fools his customers by sending more than is expected."—See page 105. current volume Bee Journal. and ask for the free pamphlet referred to. I am now prepared to fill orders promptly with FINE YELLOW-TO-THE-TIP **QUEENS**, or daughters of imported stock mated to golden drones. at 75c each. Purely-mated Queens reared from the best stock and by the best method known, is what I furnish, and will prove it to all who give me a chance. Money Order Office, Warrenton.

Address, **W. H. PRIDGEN.**
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Please mention Bee Journal when writing.

Excelsior Incubator and Brooder Cheap.....

200 eggs capacity. Good as new. Used for only two hatches. Everything complete. Will sell it for **TWENTY DOLLARS**, half the cost price
Address, **P. W. DUNNE,**
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Best honey-gathering strain in America. Tested, $1.50. Untested. $1.00. Write for a Circular. **J. D. GIVENS, Lisbon, Tex.**
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Largest and Best equipt Factory in the
SOUTH-WEST.
Send for Catalog.
FRED A. DALTON,
1A26t WALKER, Vernon Co. MO.

Queens, Bees and Bee-Keepers' Supplies

Tested Queens in April and May. $1.00. Untested. 75c. Choice Breeders. either three or five-banded Italians, at $2.00. Choice Imported Breeders. $5 00. Satisfaction guaranteed. Send for Price-List to
F. A. CROWELL,
8Atf GRANGER, MINN.

Bees for Sale in Indiana!

Italian Bees in 8-frame Langstroth hives. Per colony $5.00; 5 or more at one time $4 50 per colony I have only a limited number for sale. They are strong colonies. and ready for business. Address, **W. H. WATTS,**
19Atf **Ross, Lake Co., Ind.**

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Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Cat. free. Walter S. Pouder,
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QUEENS
Is of H. G. QUIRIN, of Bellevue, Ohio.
Ten years' experience with the best of methods and breeders enables him to furnish the best of Queens—Golden Italian—Doolittle's strain—warranted purely mated. 75c each; 6 for $4. After June. 50c; 6 for $2.75. Leather Colored same price. Safe arrival. Will run 1,200 Nuclei, so there will be no waiting for your Queens. 23A16t
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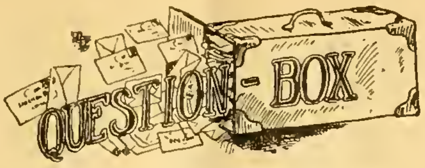

In the multitude of counsellors there is safety.—Prov. 11-14.

Hand-Holes or Cleats—Which?

Query 72.—Do you prefer hand-holes or cleats for hives, supers and shipping-cases?—Calif.

E. France—Hand-holes.

Eugene Secor—Hand-holes.

Mrs. L. Harrison—Hand-holes.

R. L. Taylor—Hand-holes, decidedly.

Emerson T. Abbott—Hand-holes, always.

J. A. Stone—For general purposes, the hand-holes.

E. S. Lovesy—Hand-holes. Cleats are in the way.

P. H. Elwood—Well-made hand-holes, as being less in the way.

Prof. A. J. Cook—I think hand-holes, tho I have no great prefereuce.

Mrs. J. M. Null—Hand-holes for shipping-cases and supers; cleats for heavy hives.

O. O. Poppletou—Cleats for hives; hand-holes for supers and shipping-cases.

Dr. A. B. Mason—Cleats for hives and supers, always; and hand-holes for shipping-cases.

Dr. J. P. H. Brown—I prefer cleats for hives, and hand-holes for supers and shipping-cases.

Chas. Dadant & Son—Our own hives have a cleat all around, so we have no need of hand-holes.

Dr. C. C. Miller—Hand-holes for shipping-cases, either for supers, and cleats, very decidedly, for hives.

D. W. Heise—I do not use single-walled hives, but for supers give me cleats every time; for shipping-cases, I don't know.

C. H. Dibbern—Hand-holes every time, as they answer the purpose just as well, and are never in the way when piling up the cases in the honey-room.

Rev. M. Mahin—For hives I prefer cleats; for supers I do not use either, and do not see the need of them. I sell all of my honey at home, and do not use shipping-cases.

J. E. Pond—It makes no difference, one is just as handy as the other for actual use. In packing, the hand-holes take up no room, and consequently will store closer than cleats.

G. W. Demaree—I use hand-holes made with a wobble-saw—they are less in the way. Cleats just below the lids of the shipping-cases answer all purposes, and I prefer them to hand-clefts.

G. M. Doolittle—Cleats for the first two; hand-holes for the last. Hand-holes are best where it is necessary to pack things close in shipping, otherwise the cleats save time in handling.

S. T. Pettit—Cleats. To save room in packing or loading, place the cleats on about one-half of the hives a little lower than on the other half, so that the cleats on one hive will slip under those of the adjoining hive.

DR. PEIRO,
CENTRAL MUSIC HALL, CHICAGO.
Please mention Bee Journal when writing.

Queen-Clipping Device Free

The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 30 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

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has a hobby which is the sheep breeder and his industry, first foremost and all the time Are you interested? Write to-day
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Bee-Hives, Sections, Shipping-Cases—everything used by bee-keepers. Orders filled promptly. Send for catalog MINNESOTA BEE-KEEPERS' SUPPLY MFG. CO., Nicollet Island, Minneapolis, Minn.
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Van Deusen Thin Foundation...
We have several 25-pound boxes of Van Deusen Thin Flat-Bottom Comb Foundation for sale. at $12.50 per box. This Foundation is preferred by many. As we have only a few boxes of it, an order for same should be sent promptly. Address **The A. I. Root Co.** 118 Michigan Street, Chicago. Ill.

BEST OF A DOZEN STRAINS
EAST SIDNEY, N.Y., April 29, 1898.
I had your strain of bees and it was by far the best of a dozen strains from other breeders. They were great workers.—L. C. JUDSON.
One Queen, $1.00; three Queens, $2.75; six Queens, $5.50.
My new book on Queen-Rearing, with supplement containing new matter, sent to all customers.
HENRY ALLEY, Wenham, Mass.
22A2t Please mention the Bee Journal.

A Book Recommended by Dr. Gallup.

THE NEW METHOD

In Health and Disease.

By W. E Forest, M. D., 12th Edition, Revised, Illustrated, and Enlarged. This is the greatest and best work ever publisht as a HOME PHYSICIAN, and as

A Guide to Health.

It makes the way from **Weakness** to **Strength** so plain that only those who are past recovery (the very few) need to be sick, and the well who will follow its teachings **cannot be sick.** It is now in many families the only counsellor in matters of health, saving the need of calling a physician and all expenses for medicines, as it teaches Hygiene and the use of Nature's remedies, **not a drug treatment.**

All Chronic Diseases

are considered, and there is not a curable disease that has not been helpt by some of the "*New Methods*" given here; even those who have been pronounced **Consumptive** have been entirely cured. While for **Rheumatism, Indigestion, Dyspepsia, Constipation, Dysentary, Liver and Kidney Troubles, Catarrh, Emaciation, General Debility, Nervous Exhaustion, Diseases Peculiar to Women,** etc., the methods are sure, and can be carried out at one's own home and with little or no expense.

A Guarantee.

So confident are the publishers of the results, that they offer to refund the money to any one who will try "New Methods" thoroughly, if the book is returned in good condition.

The New Edition

is illustrated with a number of Anatomical plates from the best English work on Anatomy publisht, and others made expressly for this work; contains 300 pages, printed on fine calendered paper, and although the price of the first edition (much smaller in size and without illustrations) was $2 50, we sell this at $1.00, postpaid.

PREMIUM OFFERS.

For sending us two new subscribers to the Bee Journal for one year, we will mail you the book free as a premium, or we will mail it for sending your own advance renewal and one new yearly subscriber. This is a wonderful premium offer. Address all orders to—

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WOVEN WIRE FENCE

With our Duplex Automatic Machine you can make a genuine Rabbit-Proof fence, and one that is also Horse-high and Bull-strong for 16¢ A ROD a Hog fence for 12c. and a Stock or Chicken fence for 18c a rod. Plain, Coiled Spring and Barbed wire to farmers at wholesale prices. Catalogue Free.
KITSELMAN BROTHERS, Box 138, Ridgeville, Indiana.

45Dtf Please mention the Bee Journal.

Basswood Honey FOR SALE

We have a limited number of barrels of **very best Basswood** Extracted Honey, weighing NET about 250 lbs. which we are offering at 6 cents per lb. f. o. b. Chicago. Do you want a barrel or so of it? If so, address, with the cash,

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

GENERAL ITEMS

Hard Spring on Bees.

This has been a hard spring so far on bees in this locality. I am feeding five colonies now to keep them alive till white clover blooms. If that fails, I will get out of the business.

JAMES W. WILLIAMS.
St. Clair Co., Mo., May 27.

◆

Colonies Strong.

My bees wintered very well. I never had them so strong at this time of year. I had two swarms May 18, and another to-day, which hangs on a tree, and I am forbidden to take it. J. C. ARMSTRONG.
Marshall Co., Iowa, May 27.

◆

Bees Starving—No Clover.

My bees are starving. We have no clover. There are a few coffee-bean trees near by, and also we have cherry-bloom. There are hundreds of dead bees under the trees poisoned. J. E. WALKER.
Pike Co., Mo , May 27.

◆

Wintered Without Loss.

My bees are doing well, and wintered all right. I wintered eight colonies without loss. I cannot do very well without the Bee Journal, as I find much useful information in its columns that have been a great help to me. We are having a good deal of rain at present.

C. H. PETTENGELL.
Phillips Co., Kans., May 27.

◆

Bees Wintered Well.

Bees are in fine condition. The brood chambers with 10 frames are boiling over with bees, and drones are flying. Fruit-trees are in full bloom, but we have rainy weather at present. Prospects are poor for a white clover flow in this neighborhood. A. F. KRUEGER.
Washington Co., Wis., May 22.

◆

Grand Flow from Tulip.

Bees are just having a picnic. The tulip is producing the grandest flow of nectar, at this writing, that I have observed for years. Whiteclover is making a good start, and wherever a few blossoms, here and there, are found, we are sure to see the honey-bee. The season so far has been quite favorable for the apiarists throughout this locality, and we trust will prove up a bountiful crop at its close. J. A. GOLDEN.
Morgan Co., Ohio, May 30.

◆

Honey from Box-Alder.

Some one asks Dr. Miller if bees get much honey from box-alder. For the first time in my experience as a bee-keeper I am able to answer the question. There are quite a number of box-alders here, and I never saw bees work basswood better than they did the alders when in blossom this spring. I found, on examination this morning, that these trees were alive with bees. The upper surface of the leaves is covered with a sticky substance which the bees were gathering. On examination, I found on the underside of the leaves immediately

Sweet Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)	.60	$1.00	$2.25	$4.00
Alsike Clover	.70	1.25	3.00	5.75
White Clover	.80	1.40	3.00	5.00
Alfalfa Clover	.60	1.00	2.25	4.00
Crimson Clover	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.
Your orders are solicited.

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Southern Home of the Honey-Bee

Is now ready for your orders for QUEENS of either **3 or 5 Banded Italians and Steel Gray Carniolans.** More than 300 Tested Queens to begin with. Untested, either race, 75 cts. each; June and until October 50 cents each. Tested $1.00 each. Good Breeders, $2 each. Straight 5-Banded or "Faultless" Queens, $5.00 each. Satisfaction guaranteed.

GEO. W. HUFSTEDLER,
Successor to Hufstedler Bros.,
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Practical Hints" will be mailed for 10c.
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OUR PRICES are worth looking at. We are making the new

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with dovetailed body and supers, and a full line of other Supplies, and we are selling them CHEAP. A postal sent for a price-list may save you $$$$

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IF YOU WANT THE

—BEE-BOOK

That covers the whole Apicultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

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Liberal Discounts to the Trade.

PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y.

BEE-KEEPERS! Let me send you my 64-page Catalog for 1898;
J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing

Frank B. Barkley Mfg. Co., 835 Old Colony Building, Chicago. Ill., will sell you a spray pump, gas engine, or cider press, direct from factory

over those which the bees were working, a small green parasite, which I think ejects the substance the bees are getting, onto the leaves below. Making a further investigation, I find in a cherry orchard—composed of several hundred trees—a similar condition, except that the parasite is black and very much smaller. Perhaps Dr. Miller can tell us something interesting in regard to these parasites, and the effect such honey will have upon the bees.

William M. Whitney.
Kankakee Co., Ill., May 27.

Bees Not Doing Well.

Bees are not doing well this year in north California. S. W. Damon.
Tehama Co., Calif., May 21.

Bees Died Away.

A year ago I had about 100 colonies; now I have only 2 weak ones left. Last year was a very poor one for bees in western Oregon. Almost all the bees around here have died away. The cause must have been, I think, old age. The colonies with plenty of honey died as well as those that had little. All the colonies went into winter quarters with all old bees, too old to live over. They didn't gather any honey at all the latter half of the season. C. J. Lindell.
Clatsop, Co., Oreg., May 23.

To Cheat is Too Costly.

The man who cheats another thinks that he has the best of a bargain, because the character for honesty and truth which he sold he valued at less than the few dollars which he gained. Yet those few dollars a single day of honest labor might have given him, while that lost innocence, that is beyond price, can never again be recovered.—Sunday School Times.

Getting Ready for White Clover.

The weather in this part of Iowa has been very fine almost all spring for our bees. I think, as a rule, bees throughout this part of Iowa came through the winter in fine condition.

I began 1897 with 14 colonies, averaged 66 pounds per colony, spring count, and increast to 31 colonies; four of the late ones were somewhat light, and I lost two of these. The rest, as a rule, came through in good condition, and are now doing well, getting a good ready for white clover and basswood, of which there seems a prospect for a good crop, especially if we still have rains and warm weather. J. W. Sanders.
Marshall Co., Iowa, May 27.

House for Wintering, Etc.

The Bee Journal comes in good shape steadily. It is a great help to me. Some articles are well worth a year's subscription. In the winter I wrote and got an answer about keeping bees in Dakota. But the one answering did not get quite onto how I built my frame house, and about letting the bees out for air. I did not have the entrance through the wall to the outside; it was through the chaff packing to the inside. They came out all right. I gave them a flight about the middle of March.

I had a visit from an old Canadian bee-keeper (Mr. James Miller) who, when

Page & Lyon Mfg. Co. New London, Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

Please mention the American Bee Journal. 7Atf

Two Special Offers.

As explained in former ads., publishers can afford to put forth extra efforts in securing *new* subscribers; as the majority remain, once they become subscribers to a *good* journal. It is from this point of view that I make the following offers:

Offer No. 1.

To any one not a subscriber to the Review who will send me $3 00. I will send the Review for 1898 and 1,000 strictly firstclass, snow-white one-piece Sections. After accepting this offer if any one wishes to buy more sections, I will furnish them at the following prices: 1,000, $2.75; 2,000 for $5.25; 3,000 for $7.50; 5,000 for $12 00. Sections will be shipt from any of the following points: Flint, Mich.; Chicago, Ill.; Medina, O.; Jamestown, N.Y.; Higginsville, Mo., or Omaha, Neb.

Offer No. 2.

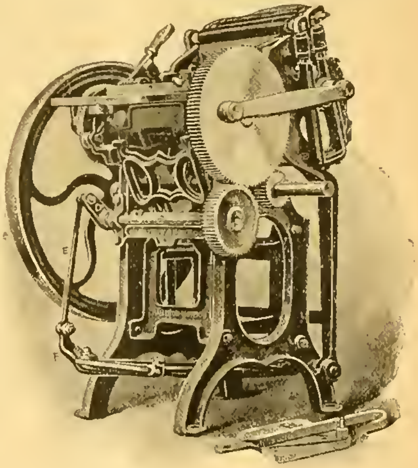
To any one not a subscriber to the Review who will send me $1.50, I will send the Review one year and a fine, TESTED Italian Queen. Purchasers may have either the bright, golden strain, or the dark leather-colored reared from imported mothers. After accepting this offer, if any one wishes more queens, they will be furnisht at the following prices: Single queen, 90 cts.; 3 for $2.65; 6 for $5.00; 12 or more at 75c each. Orders will be filled in rotation, and safe arrival guaranteed.

Unless otherwise ordered subscriptions will begin with the January issue; and the December, 1897, number will also be sent, free.

If you are not acquainted with the Review, and wish to see it before subscribing, send 10 cents for three late but different issues, and the 10 cents may apply on any subscription sent in during 1898. W. Z. HUTCHINSON,
Flint, Mich.

PRINTED Envelopes and Letter-Heads.

We have put in a new small Job Printing Press on which to print our own stationery, circulars, etc., and while being able to do this we may as well do some work for our readers, if they will favor us with their orders. If you



want Envelopes or Letter-Heads, send 2-cent stamp for samples and prices. We will make right prices for neat, good work. All orders can be filled by express, at small charge, as the weight would not be great.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

Frank B. Barkley Mfg. Co., 835 Old Colony Building Chicago, Ill., will sell you carts, wagons, buggies, carriages and harness direct from factory. 21A4t

The Bee-Keeper's Guide

This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published today. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "The Bee-Keeper's Guide."

Given For 2 New Subscribers.

The following offer is made to PRESENT subscribers only, and no premium is also given to the two new subscribers—simply the Bee Journal for one year:

Send us **Two New Subscribers** to the Bee Journal (with $2.00), and we will mail YOU a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both together for only $1.75. But surely anybody can get only 2 new subscribers to the Bee Journal for a year, and thus get the book as a premium. Let everybody try for it! Will you have one?

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

looking at the Bee Journal, saw what was said about painting hives outside as being an injury, and making the hive damp inside. He advises painting both inside and outside, then the hive will never be damp, the lumber will keep dry, and the damp will run outside.

ROBERT McCRADIE.
Norman Co., Minn., May 17.

Wet, and Bees Killing Drones.

It is very wet, and bees are killing drones. Honey is plentiful on the market, as that carload from California is not exhausted. I hear of a number of runaway swarms being caught in the parks. There are plenty of roses and other flowers for decorating soldiers' graves to-day. There was a large military funeral yesterday over the remains of a soldier who was reared here and enlisted in the Spanish war.

MRS. L. HARRISON.
Peoria Co., Ill., May 30.

Double Brood-Chamber Hives.

In a late number of the Bee Journal some one asks about using double stories of 8-frames for comb honey. I put the empty set of combs on top of the brood-chamber the forepart of the season; the queen uses about ⅓ of the upper frames, that is, a half circle out of the bottom of the upper frames for brood. The season of 1896 I took from one two-story colony 110 pounds of section honey, and the eight extra frames for extracted—about 40 pounds. The sections were on top of both stories.

For the last year I have been using honey to cure bee-stings. I put it on the place where I am stung, and with me it is almost an instant cure. It stops pain and there is no swelling. This may be an old remedy.

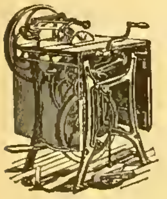
Bees wintered all right.

F. H. MOLBY.
Washington Co., Kan., May 28.

EGGS From pure bred, barred P. Rocks Large and fine plumaged $1.00 per 15. Also Light Brahmas and Black Langshans, same price. B. P. Rock Cockerels, $1.25.

MRS. L. C. AXTELL,
ROSEVILLE, ILL.

Please mention Bee Journal when writing.



ONE MAN WITH THE UNION COMBINATION SAW

Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery Sold on Trial. Catalogue Free.

SENECA FALLS MFG. CO.,
46 Water St SENECA FALLS, N. Y

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COMB FOUNDATION Wholesale and Retail.

Working Wax into Foundation for CASH **A Specialty.**

Hives, Sections, and a full line of Supplies. The **best** of everything. Write for Catalog, with prices, and samples of Foundation and Sections.

BEESWAX always wanted for cash or trade.

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AUGUSTA, WIS.

Frank B. Barkley Mfg. Co., 835 Old Colony Bldg., Chicago, Ill., will sell you a Feed Cooker direct from the factory.

BRANCH OF... **THE A. I. ROOT COMPANY,**
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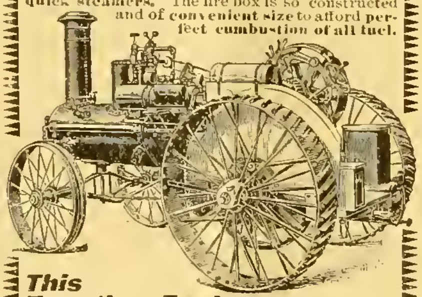
PHILADELPHIA, PENN.

We keep here everything in the Supply line of latest improvement.
Cleated Separators, Improved Smokers, Weed Foundation, 1898 Goods of all kinds.
Business conducted same as at Medina.
Dealers can order here, as well as consumers, at factory prices.
Save freight and get orders filled at once. Also as fine a strain of 3 and 4-banded Italian Bees as ever gathered honey.
Full 8-frame colonies, $6.00; 3-frame nucleus, $2.75.
14Etf **These Include Guaranteed Italian Queens.**

RUMELY ENGINES

Supply the maximum of power at the minimum of cost for fuel, time, attention and repairs. The fire box is surrounded with water, hence they are quick steamers. The fire box is so constructed and of convenient size to afford perfect cumbustion of all fuel.



This Traction Engine is from 8 to 20 h.p *Has Perfect Traction, is a Good Puller, Fast Traveler, Easy Steamer, Long Liver,*— More about it and our Portable, Semi-Portable, Simple and Compound Engines, Threshers, Horse Powers, Saw Mills, etc., in our new catalogue. It's FREE Send for it.

M. RUMELY CO., LA PORTE, IND.

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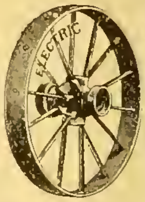


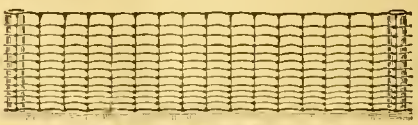
A Good Wagon begins with good wheels. Unless the wheels are good the wagon is a failure. IF YOU BUY THE **ELECTRIC STEEL WHEEL** made to fit any wagon—your wagon will always have good wheels. Can't dry out or rot. No loose tires. Any height, any width tire. Catalog free.

ELECTRIC WHEEL CO.
Box 16 QUINCY, ILL.

—ITALIAN—
Bees and Queens

Queens $1.00 Bees by the pound $1.00; Nuclei, two frames with Queen, $2.00; one-frame $1.50. Also **Barred and White P. Rocks and Silver-Laced Wyandottes.** Eggs for Sitting at $1.00 per 15.

17A8t Mrs. A. A. Simpson, Swarts, Pa.



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Hav-ana trouble with the Spaniard, but in America he's like wood fences, behind the times, and will have to go. Buy of the

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

We want

EVERY BEE-KEEPER

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Our 1898 Catalog

☞ Send us your name and address and we will take pleasure in mailing you a copy.

G. B. LEWIS CO., WATERTOWN, WIS.

Special Agent for the Southwest—
E. T. ABBOTT, St. Joseph, Mo.

Mr. Abbott sells our Hives and Sections at factory prices.

Ho, for Omaha!

As we have many customers in the Northwest, and believing they will appreciate the low freight rates obtained by purchasing goods from a railroad center nearer to them than we are, getting a direct through-freight rate, thus cutting the freight in half, we have establisht a branch house at 1730 South 13th St., Omaha, Neb., where we will keep a complete line of all Apiarian Supplies, the same as we do at Higginsville, Mo. With the quality of our goods, we believe most bee-keepers in the West are already acquainted, but to those who are not, we will say that our goods are par excellent. Polisht, snowy-white Sections, beautiful, straw-colored transparent Foundation, improved Smokers and Honey Extractors, and all other first-clas sgoods, are what we sell. Kind and courteous treatment and honorable dealing our motto. On these bases, we solicit an order, feeling sure that if we sell you one bill of goods you will be our customer in the future.

☞ PROGRESSIVE BEE-KEEPER, 50c per year. "Amateur Bee-Keeper," 25c. Both for 65c. postpaid. Sample copy of the PROGRESSIVE free, and a beautiful Catalog for the asking.

Address, Leahy Manufacturing Company, **Higginsville, Mo.,** or **1730 South 13th St., Omaha, Neb.**

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, May 19.—Very little call for honey, and the offerings also limited. Prices without change from late quotations. California extracted sells well and the stocks here are light. Weather now warm and prospects generally reported good in the surrounding States. Beeswax scarce, and 27 to 30c is bid for it. R. A. BURNETT & CO.

Kansas City, May 19.—The supply of 1897 comb and extracted honey is about all sold. Considerable inquiry for new comb. Something fancy would bring a good price.
C. C. CLEMONS & CO.

Cincinnati, May 21.—Demand is slow for all kinds of honey, especially comb. Prices for best white comb honey, 10 to 13 cents. Extracted honey brings 3½ to 6c. according to quality. Beeswax in good demand at 25 to 28c for good to choice yellow.
CHAS. F. MUTH & SON.

Boston, May 20.—Fancy No. 1, in cartons, 13c.; in glass-front cases, 12c.; A No. 1, 11c.; No. 1, 9 to 10c.; No. 2, no sale. Extracted, white, 6@7c.; light amber, 5@6c. Beeswax is in very light supply, and if pure would readily bring 27c.

There is nothing new to note in our market for honey. As usual at this time of year, the demand has dropt to almost nothing, but as the supply is light, prices are well maintained and firm. BLAKE, SCOTT & LEE.

Cleveland, May 20.—Fancy white, 12 to 12½c.; No. 1, 11c; No. 1 amber, 9 to 10c.; buckwheat, 8c. Extracted, white, 6c.; amber, 4 to 5c. A. B WILLIAMS & CO.

San Francisco, May 11.—White comb, 8½ to 10c; amber, 6½ to 7½c. Extracted, white, 5½@6c.; light amber, 4¾ to 5¼c. Beeswax, 23@25c

The French bark Alice, sailing Sunday for London, carried 135 cases of extracted honey. This will probably be the last shipment to Europe for some time. Stocks of extracted are now very light. Comb is still in fair supply. Values throughout are being well sustained.

Detroit, May 21.—Fancy white honey is lower and now quoted at 11c. No. 1, 9@10c; fancy dark, 7@8c; No. 1 dark, 6@7c. Extracted, white, 5@6c; dark, 4@5c. Beeswax 27@28c.

There are no changes in quotations, and very little desirable honey left. Sales are so slow that it is difficult to quote. The poor lots are being pusht at what they will bring.
M. H. HUNT.

Minneapolis, May 20—Honey much more encouraging. Fancy white clover comb is selling here now at 10½@11½c. Not advisable to ship darker than amber. Extracted fancy white clover, 5½@6c; amber, 5c; dark, 4@4½c.

Outlook for honey much more encouraging.
S. H. HALL & CO.

Indianapolis, May 21.—Fancy white 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand. WALTER S. POUDER.

Milwaukee, May 20.—Fancy 1-pound sections, 11@12c; A No. 1, 10@11 cents; No. 1 8@10c; amber, 8@8½c; dark, 7@7½c. White extracted in barrels and kegs, 5½@6c; amber, 5@5½c. Beeswax, 26@28c.

The demand for honey continues very good indeed, and values fairly sustained. While the best grades are most salable, the inferior grades meet attention, and the movements are quite satisfactory. A. V. BISHOP & CO.

Buffalo, May 21.—There is a very good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

St. Louis, May 20.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c Beeswax, 20 to 22c.
WESTCOTT COM. CO.

Large New Maps of KLONDIKE—ALASKA—CUBA FREE

To all who order the People's Atlas of us ***now*** *we will send* ***free*** *maps of Cuba and Alaska,* ***newly engraved*** *from the latest* ***governmental surveys*** *and* ***official information.*** *Size of each map,* ***14 by 22 inches.*** *The Alaska map accurately locates the* ***Klondike*** *country and other* ***great gold-fields*** *in that far-off land, and the* ***routes*** *by which they are reached. A brief* ***history*** *of* ***each country*** *accompanies the maps.* ***See our offer below:***

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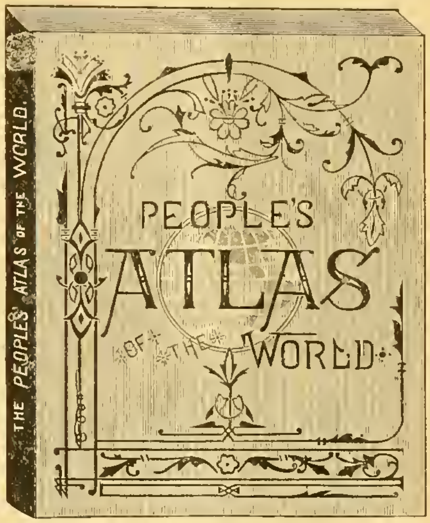
THE PEOPLE'S ATLAS contains over 200 large Maps and Illustrations, and 132 Pages, each page 11 by 14 inches. It gives the Population of each State and Territory, of All Counties of the United States, of American Cities, by Last U. S. Census.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EACH STATE.—This Atlas gives about each State the Population for the Past 50 Years, History, Miles of Railroad, Soil, Climate, Productions, Industries, Educational and Religious Interests, Interest Laws, Etc., Etc.

THE UNITED STATES. — This Atlas gives the Popular and Electoral Votes for President in the years 1892 and 1896, by States. List of All the Presidents, Agricultural Productions, Mineral Products, Homestead Laws and Civil Service Rules, Statistics of Immigration, Public Debt for the Past 100 Years, Gold and Silver Statistics, Postal Information, and Other Information that should be in every Home, Store, Office and School-room.

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We will mail this great Atlas for only 50 cts.: or for $1.40 we will send it with the BEE JOURNAL for one year; or we will mail the Atlas FREE as a premium for sending us **one new subscriber** (at $1.00) to the BEE JOURNAL for 1 year.

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118 Michigan Street, CHICAGO, ILL.

Italian Bees For Sale !!

We have arranged with a large bee-keeper in Lee County, Ill., (about 100 miles west of Chicago), to fill our orders for Italian Bees at the following prices there, which include a good Queen with each colony:

8 L. frames of bees in light shipping-case, $3.75
5 at $3.50 each.
8 L. frames of bees in dovetailed hive, $4.25.
5 at $4.00 each.

Prompt shipment after May 1, and safe arrival and satisfaction guaranteed. Address
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Cash PAID FOR Beeswax

For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 28 cents per pound, CASH. No commission. Now if you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,
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When writing to Advertisers.

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.... Comb Foundation

We can now furnish the very best that can be made from pure wax. **Our New Process of Milling** enables us to surpass the previous efforts of ourselves and others in the manufacture of Comb Foundation.

It is always Pure and Sweet.
It is the kind that does not sag.
It is the kind you want.

If you once try it you will have no other. Samples furnisht **FREE.** Large illustrated Catalog of all kinds of

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And a copy of the American Bee-Keeper, sent upon application. Address,

THE W. T. FALCONER MFG. CO.,
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NEW YORK, is the city,
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Who is prepared to ship you, on short notice, **anything** in the apiarian line.

Are YOU the man who wants to buy ?

☞ Send for Catalog, anyway.

CARLOADS—

Of Bee-Hives, Sections, Shipping-Cases, Comb Foundation, and **Everything** used in the Bee-Industry.

We want the name and address of every Bee-Keeper in **America.** We supply Dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment.

Write for Catalogs, Quotations, etc.

Inter-State Manufacturing Co.,
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Frank B. Barkley Mfg. Co., 835 Old Colony Bldg., Chicago, Ill., will sell you a bicycle or sewing machine direct from factory.

The A. I. Root Co.'s Goods **Wholesale. Retail.**

Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**
Cash for Beeswax. BELL BRANCH, MICH.

I ARISE

TO SAY to the readers of the BEE JOURNAL that

DOOLITTLE

has concluded to sell —BEES and QUEENS— in their season, during 1898, at the following prices :

One Colony of Italians on 9 Gallup frames, in light shipping-box $6 00
Five Colonies..... 25 00
Ten Colonies...... 45 00
1 untested queen. 1 00
6 " queens 5 50
12 " " 10 00
1 tested Queen... $1 50
3 " Queens . 3 50
1 select tested queen 2 00
3 " " Queens 4 00
Select tested queen, previous season's rearing . 3 00
Extra Selected for breeding, THE VERY BEST.. 5 00
About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

—0—

☞ Circular free, giving full particulars regarding the Bees and each class of Queens.

Address

G. M. DOOLITTLE,
1A25t BORODINO, Onon. Co., N. Y.

21st Year **Dadant's Foundation.** 21st Year

Why does it sell so Well?

Because it has always given better satisfaction than any other.
Because **IN 21 YEARS** there have not been any complaints, but thousands of compliments.

We Guarantee Satisfaction.

What more can anybody do? **Beauty, Purity, Firmness, No Sagging, No Loss.**
PATENT WEED PROCESS SHEETING.

Send Name for our Catalog, Samples of Foundation and Veil Material. We sell the best VEILS, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

LANGSTROTH ON THE HONEY-BEE, Revised.
The Classic in Bee-Culture—Price, $1.25, by mail.

Foundation and Beeswax Prices Advanced.—We quote an advance of **five** cents in Foundation, wholesale and retail, on the prices quoted in our Circular. BEESWAX WANTED, at advanced prices also.

CHAS. DADANT & SON,
HAMILTON, Hancock Co., ILL.

Please mention the Am. Bee Journal.

OUR MOTTO—" Well Manufactured Stock ! Quick Shipments ! "

SECTIONS, SHIPPING-CASES,
—AND—
BEE-KEEPERS' SUPPLIES.

We make a specialty of making the very best Sections on the market. The **BASSWOOD** in this part of Wisconsin is acknowledged by all to be the best for making **the One-Piece Honey-Sections**—selected, young, and thrifty timber is used.

☞ Write for Illustrated Catalog and Price-List FREE.

MARSHFIELD MFG. CO., Marshfield, Wis.

Please mention the American Bee Journal when writing.

ROOT'S GOODS.

Our Specialties:

- The Fence and Plain Sections.
- Weed New Process Foundation.
- Cowan Extractors.
- Porter Bee-Escapes—the best made.
- Dovetailed Hives—with Danz. Patented Cover and Bottom.
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- No-Drip Shipping-Cases.
- Gleanings in Bee-Culture, Illustrated, Semi-Monthly.

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AMERICAN BEE JOURNAL.
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CONTRIBUTED ARTICLES

Cold Water vs. Hot for Bee-Stings.

BY DR. E. GALLUP.

On page 345 (of Gleanings), Mr. Chalon Fowls, also the editor, goes into spasms about Gallup's cold-water treatment for bee-stings. Now I propose to show that their conclusions about cold water driving any disease in, and causing congestion, is entirely wrong. The facts are the reverse. It draws poison out instead of driving it in.

I once treated 76 cases of measles, in both old and young, in six weeks. Not one of the cases were sick in bed over three days, and there was no relapse and no taking cold. All were put in the cold pack to bring out the measles. So rapid and quick were the recoveries that the doctors said they could not be measles. The medical doctors had nine cases at the same time, and three of their cases died, and the other six made a slow recovery. Of course their cases were genuine measles!

Dr. Brandt, of Stettin, Germany, uses cold water for typhoid fevers, and only has lost about two per cent.; and they have adopted the Brandt treatment in the hospitals in Germany and France. Before adopting the Brandt treatment the death rate was 42 per cent., and since, it only averages 7 per cent., and Dr. Brandt says that the reason why they lose the 7 per cent., is because they go at it half-hearted, and not as heroic as they should. I have never lost but three cases in all my 42 years' practical experience, and those three had perforation of the bowels before I had anything to do with them.

Dr. Page, of Boston, has treated successfully patients in New York, St. Paul, and other places, by telegraph, with the Brandt method.

I quote from a small pamphlet by Dr. W. E. Forest. He says: A Dr. Fenwick, reviewing the results of the treatment of 1,000 cases of pneumonia at the London hospital—the conclusion he drew was that the best results were obtained by the use of ice sponging and packs. Instead of mentioning 23 drugs, as Dr. A. K. Hill, of New York, did, he mentioned only four, and spoke ill of each of them. Dr. Marion Sims, of Chicago, went to Russia at the time of the Asiatic cholera, and was admitted to the hospitals there, and saved every case by the cold-water treatment that he tried it on. A doctor in Nashville, Tenn., saved every case of yellow fever that he treated with cold water. I saw his statement in "Brathwait's Retrospect," one of the foremost medical publications in the world.

Now we will take any case of cholera morbus, when the patient is vomiting, purging, and crampt; even after the medical doctors have given them up, put the patient into a cold, wet-sheet pack, not hot or even warm. The moment the patient is envelopt in the sheet all disposition to vomit or purge or cramp is stopt *instantly*. Let the patient lie in the pack 35 or 40 minutes. I have cured any quantity of patients in one hour, and they are entirely cured. I have cured cases of inflammatory rheumatism (where they had suffered for six weeks under medical treatment) in two hours.

We all know that under the drug and hot-water treatment the great danger is that the disease goes to the heart, and it never does under the cold-water treatment, either in rheumatism, pneumonia, erysipelas or any other disease. It is always drawn out instead of driven in.

Years ago I was given up to die by two physicians, with inflammatory rheumatism. They had drugged me to their heart's content, and applied hot liniments and hot applications until I expected to die, and by an accident I was saved by cold water.

I saw a neighbor carried onto the ferry boat by two men. He was entirely helpless with inflammatory rheumatism. A fractious team on the boat backt up and threw the man into the river, and there was ice in the water. He was entirely cured in an hour.

Chas. F. Muth.—See page 376.

I saw a man go into the river to wash sheep; his feet were all swollen with rheumatism. The next day he was well. I might tell you case after case of that kind.

Now allow me to tell you how to treat a sprain. Rub it, then whether knee, wrist, ankle or foot, wet a sheet in cold water, wrap up the sprain and put a blanket outside the sheet. Sleep in it all night, and see how well it will be in the morning. I have seen the hot applications used and the patient a cripple from three to six months, whereas I never failed to cure one in three days.

My youngest boy, in Iowa, was stung by a single bee on the jugular vein. I am satisfied he would have been a corpse in 30 minutes, as he swelled up, dropt over insensible almost instantly. I pulled off his clothes just as quickly as possible, put him in a cold-sheet pack, and in 30 minutes he was well.

Now, Mr. Fowl's horse lived in spite of his treatment, and the poison had to run out in sores, according to his own statement. Suppose he had poured on cold water and wet the horse thoroughly, then wet a blanket in cold water and envelopt every part that was stung; then piled on dry blankets or quilts over all, left the nose so the horse could breathe, left the horse in the pack an hour, then rubbed him thoroughly—is Mr. Fowls sure the horse would not have been entirely well in two hours, with no poison to run out in sores? I am *positive* about this. Mr. Fowls' and the editor's are theory pure and simple.

I saw a little boy bitten by a rattlesnake. Two doctors gave him the regulation whiskey and strychnine. Towards morning they decided the boy was dying. Then I was called in to see him die, I suppose, and I drew the whiskey, strychnine and snake poison all out with the cold-sheet packs, and the little fellow did not die worth a cent. You say it would have driven it in? Facts say not. Orange Co., Calif.

Forming Nuclei—How It is Done.

BY G. M. DOOLITTLE.

QUESTION.—In making nuclei I have always been troubled by so many bees going back to the parent hive that the prospective nuclei were nearly worthless. Then I wish to introduce virgin queens to the nuclei formed, and in this way I am not very successful. A friend tells me that you have a plan for making nuclei and introducing virgin queens at the same time, which you gave in the bee-papers some time ago. Will you please tell the younger readers about it, and how it works with you after years of trial?

ANSWER.—As it has been some years since I have said anything regarding the matter of forming nuclei, it may be excusable with the older members of the fraternity if I say a few words on this subject for those who have been added to the ranks of apiculture in recent years, especially as the plan has always proved successful.

The first requisite to the plan I use is a box made as follows: Get out two pieces of lumber 8 inches long by 7 wide by ¾ or ⅞ thick; also two pieces 14 inches long by 7 wide by ¼ thick. The latter are nailed to the former so as to form a box about 12 by 7, inside measure, without sides. For sides I use two pieces of wire-cloth, cut 14 inches long by 8½ wide. One of these is nailed on permanently, while the other is left so as to be easily removable, by nailing the wire-cloth to a little frame like a slate-frame, which frame is lightly tackt to the box, or hinged, according to the wishes of the operator. In the top of the box is bored a large hole, into which a funnel is to be inserted. This funnel is to be large enough to allow one of the brood-frames from your hive being shaken inside of it, and the hole in the small end should be 2½ to 3 inches, so that the bees will readily roll or pass down through it and not clog. This funnel is very similar to those used five or ten years ago in putting up bees, when so many were sold by the pound. The hole in the box should also have something to close it, like a large button, made from your ¼-inch stuff, or a tin slide.

Having a funnel and box ready, go to any hive that can spare from it from a pint to two quarts of bees, according to the size of the nuclei desired; take out a frame or frames having bees on the combs, and place on the outside of the hive. If at a time of honey-dearth, so that robber-bees may be troublesome, hang the frame in an empty hive, and throw some old bag or blanket over, thus running no risk of creating a row in the apiary, or having your nuclei robbed out after made. Give the frames several sharp knocks with your thumb-nail or a little stick, to cause the bees to fill themselves with honey, and when so filled, shake as many bees down through the funnel into the box as you wish in your nucleus. Take out the funnel and close the hole, when you will put the frames from which you shook the bees back into the hives, and close them.

In all such operations especial care must be used not to take the old queen with the bees thus taken; for if you do the colony will be greatly injured, and the virgin queen you attempt to introduce will be destroyed. To be sure you do not get the queen, it is always well to see her, and then set the frame she is on out of the hive till you have taken all the bees you wish at that time.

Having the bees in the box, take the same to any room or shady place, or to the cellar, and throw a blanket, old coat, or piece of carpet over it, to darken it, where it is to be left for four to six hours. In an hour the bees will begin to realize their queenless condition, and tell of it by breaking the cluster they had formed, and running frantically about the cage; and, as time goes on, this distress will be more manifest till they fairly beg for something in the shape of a queen; and the longer they are kept without one the more sure you will be of their accepting the one you give them.

When the time has arrived that I think it proper to give the queen, which in no case should be in less than four hours from the times they were shaken into the cage, I go to the queen-nursery and get a virgin queen and give them. To put the queen in, set the box down suddenly, so that all the bees will fall to the bottom, when the hole is opened in the box and the queen allowed to run in with the bees. The bees will at once set up a most joyous hum, thus telling of their new-found treasure as plainly as if they could talk.

The box is now left as it was before the queen was put in, for from 5 to 12 hours, just in accord with the time the bees were put in. If put in during the early forenoon, then they are taken out near sunset; if during the afternoon, then not till the next morning. When ready to take from the box, a hive is prepared by placing in it a division-board, a frame containing a little brood, and one having two or three pounds of honey, all of which are put on the opposite side of the hive from where you wish the bees.

Now get the box, in which you will find the bees all compactly clustered like a swarm, and carefully remove the wire-cloth movable side, when, with a quick jerk, the bees can be dislodged from the box to the bottom of the hive. Now quickly draw the comb of honey, brood and division-board across the rabbets of the hive, in the order named, to where the bees are, and they will be immediately on them. The hive is now closed, the entrance opened on the side farthest from the combs; and if all has been rightly conducted, and works as it should, in a week you will have a nice little colony with a laying queen, from which a full colony can be built up, or queens reared for market.

If you do not wish to make the box and funnel, the bees can be shaken into a tight hive, some wire-cloth fastened to the top, the queen run in through a hole in the side, or under one corner of the wire-cloth, and the hive left bottom up after the queen is put in, so that the bees will cluster on the bottom. In hiving, turn the hive right side up, remove the wire-cloth, set in the combs and division-board, doing all so quickly that the bees will not have time to crawl up the sides before you get the combs in. Now close the hive at the top and open the entrance, when you have the same thing as before, tho the box plan makes one much more independent of the whims of the bees; and where many nuclei are to be formed, it amply pays for all cost in construction.—Gleanings.

Onondaga Co., N. Y.

Management of Shallow Brood-Chambers.

BY H. D. EDWARDS.

On page 262, a writer asks a number of questions in regard to shallow brood-chambers. As I have been using a shallow brood-chamber hive for a number of years I thought perhaps I might give the enquirer some information in regard to them.

In regard to his second question—What kind of a hive to use—I use a hive invented by a Mr. Armstrong some years ago. It is side-opening, self-locking, and is reversible, either the case or the frames separately; it is the best and most convenient hive I have ever used, and I have tried almost all the different hives placed on the market. The brood-frames are 5x17 inches, inside, and are interchangeable with wide frames that take the 4x5 section by putting a dummy one inch thick in the end of the wide frame.

Question 4—They will not build brace-combs between the brood-chambers to any great extent; sometimes a colony will build some brace-combs, while other colonies will not build any.

As to Question 6, I do not know that I can answer it any better than to give my way of managing during the honey season here in Illinois, where we have to depend on white clover for our surplus, having no basswood. What surplus we get here comes between May 15 and July 1—a period of 5 or 6 weeks, unless we have a fall run of honey, which has not often occurred of late years. My plan is not new or original, but seems to succeed better with me than any plan I have tried.

When the colony swarms, I move the old colony away and place a shallow brood-chamber where the old hive stood. I then take off the supers from the old hive and put them on the new hive, putting a queen-excluding honey-board between the supers and the brood-chamber. I then put the swarm into the new hive, and in a few hours they are at work again in the sections. As the supers are filled I place another shallow brood-chamber on top of the first brood-chamber, and let them fill up for winter. If the honey-flow stops before the second brood-chamber is full, and there is no fall run of honey, then the bees will have to be fed; or, if I have bees enough, I unite them with the old colony, which usually has plenty of honey if the season is good.

I put a shallow brood-chamber on the old colony, and if the season is good, or there is a fall run of honey, they will fill it, which can be extracted. I leave the honey-board on only 3 or 4 days, or until they get started in the brood-chamber, and I am not troubled with the queen going into the supers. I use foundation in the brood-chamber as well as in the sections. Sometimes I use only starters in the brood-chamber.

I use two brood-chambers to winter the bees in, and think that bees winter better in them than any hive I have tried.

Jersey Co., Ill.

Suggestions on Section-Cleaners, Etc.

BY A. F. FOOTE.

I want to thank Mr. C. P. Dadant for his kind and comprehensive answer to my questions about rendering beeswax, on page 258. While I produce hardly a tenth of a "hundred dollars worth" of wax yearly, I want the best in that as well as everything else pertaining to bees; that is why I subscribed for the "Old Reliable," and I am getting good interest on the investment all right, my only regret being that I did not begin before.

HOLDING SECTIONS ON THE CLEANER.

Mr. J. A. Golden gives me a little light (page 322) on how to hold the sections on the cleaner to keep the sandpaper from gumming. Thanks to him and the Bee Journal, I have a section-cleaner, patterned after the one illustrated on page 33, only mine is a combined perpendicular and horizontal affair, and works nicely. The wheel is 9 inches in diameter, a sheet of sandpaper being just wide enough to cover the perpendicular side, or I would have made it larger. I weighted the surface of the wheel by filling 14 holes of uniform depth and distance apart with melted lead, which gives it greater momentum and a steadier motion. No glue is used to fasten either the felt or sandpaper, but instead I tackt them on, close to the edge with small staples, which are not the least in the way, and can be removed in five seconds to renew the sandpaper.

I want to tell Miss "Flody" that to the end of the shaft that carried the needle I have attacht a nice, little turning-lath, by which all sorts of pretty and useful things can be turned out, and also an arrangement for attaching a drill for drilling holes through iron.

After getting everything in working order, I invited my wife to the shop to see what could be done by "Foote"-power, "properly applied." What does she do—after looking it all over critically—but to ask mischievously if I couldn't contrive some way to attach the "barrel churn" to it and do the family churning at the same time while cleaning sections, etc.

If that man Clark gets his idea (page 258) of holding a tool on the side of a grindstone instead of the top, patented, I hope he will not sue me for infringement, for I had my machine all contrived before his letter appeared.

My 40 colonies of bees, with two exceptions, are unusually strong in all respects, and the prospects for a good honey harvest were never better. Plenty of moisture combined with warm weather has developt the clovers—white and Alsike—to a splendid growth, and I expect to see the blossoms within 10 days at farthest.

I have a convenient place fixt up in my shop on purpose to keep the Bee Journal for easy reference, and I find it a great help in many a time of need.

After writing the above I pickt up the last Bee Journal and came across Jno. S. Bruce's description of his section-cleaner (page 332). The idea struck me so favorably that I went to work immediately and made one. In less than four hours I had it ready to attach to the turning-lathe end of my machine. After cleaning a number of old and very dirty sections, bottom slats to supers, wedging-boards, etc., I decided that for rapid work it beats the sandpaper about "16 to 1." It cleans out the "scallops" in good shape, and I am not sure but it would "clean out" the Spanish fleet if Sampson could find it.

Instead of using a solid roller and extra piece of tin, as Mr. Bruce suggested, I used only a single tin, fastening each end to a block of hard wood about an inch long, thus leaving the space between the blocks hollow; this lets all fine propolis drop through the holes out of the way, doing away with the necessity of using "fire and water" to clean it, for it never clogs. To remove what accumulates on the inside, I bored a hole in one of the blocks. In perforating the tin, I used a small awl, first covering it with pieces of leather to near the point, as a gauge to make the holes of uniform size. Fitting sections for market, a little extra touching up with the sandpaper will be a good thing.

Thus, owing to the American Bee Journal and its willing-to-tell-what-they-know correspondents, I have another valuable addition to my apiarian fixtures. I will surely have to send the editor another $1.00—next year.

Mitchell Co., Iowa, May 30.

FACING COMB HONEY.

Opinions, Suggestions and Advice from the Commission-Men.

Thinking that those who quote the honey market for the American Bee Journal, and handle honey extensively every year, might be able to help bee-keepers somewhat along the line of packing comb honey for city markets, we sent to them the following letter:

CHICAGO, May 31, 1898.

Dear Sirs:—You doubtless have noticed what has appeared lately in the bee-papers regarding the facing of comb-honey. The hottest part of the discussion was called out upon the publication of this paragraph, written by one of the most prominent comb-honey producers in this country:

"And I also claim that there is nothing out of the way, if any one chooses to do so, in shipping cases of honey having XXX facers and XX or X honey inside, *on commission*. Yea, more, I claim that there would be nothing *dishonest* in filling the center of the case with buckwheat honey, the same having XXX white-honey facers, providing it was *shipt on commission*, every case alike, and the producer thought it to his interest to do so."

Will you kindly write us your opinion of the above paragraph, and also on the general subject of facing or putting up comb honey for the city markets? As an experienced honey-commission man, we feel that your opinion, suggestions and advice, would be of great value to bee-keepers who desire to realize the most out of their honey.

We should be pleased to have as prompt a reply as possible, so that we can publish it in time to be of service this season.

Thanking you in advance for your kindness, we are

Very truly yours,

GEORGE W. YORK & Co.

We here give all the replies that were received in time for this issue of the Bee Journal:

GEORGE W. YORK & Co.—

Gentlemen:—I would not put up honey faced with a nice article and filled with inferior lots. It cannot but injure the business, and I think it would be a poor way to build up a business. I like to have things about what they appear.

Yours truly, M. H. HUNT.

Detroit.

GEORGE W. YORK & Co.—

Gentlemen:—Replying to yours, just received. If a honey-producer desires to establish his reputation and brand of honey in any market, thus securing the very best results every year, we believe his only way to do so is to pack his honey absolutely honest, the front to be a fair sample of the entire grade. Those desiring to ship a lot of honey and let it sell for what it will fetch, without any brand or regard for reputation—it might be well enough to ship it well faced up without any owner's brand upon it, and thus sell upon its merits. Altho it is practical, it is hardly policy to advocate. Buyers, the last few years, seldom buy without opening several cases of any lot, and thus decide the question.

Very respectfully, BATTERSON & Co.

Buffalo.

GEORGE W. YORK & Co.—

Dear Sirs:—We note your favor, and in regard to packing comb honey would suggest that the facers should represent the kind of honey the case contains. Each grade of honey should be packt separately. We expect the facers to be as good as the case contains, but the difference should be but slight. It is a help to the commission-man to be able to say, "This honey is honestly packt."

In selling, we sell by the way the honey appears. The buyer, if he finds the honey to run different from what the face indicates, returns it to us—which he has a perfect right to do—and we take it back and refund him his money.

All honey put up for Fancy No. 1, or No. 2 White, should run even in color, and all sections be equally well filled. For lower grades it does not make so much difference.

We do not want to handle any falsely packt, or adulterated, honey. Yours truly,

St. Louis. WESTCOTT COM. CO.

TO THE AMERICAN BEE JOURNAL:—

Is there ever a time when it is to the producer's interest to face his cases of comb honey with fancy white and fill in the center with dark grades? To my sorrow I am well aware that this is frequently done, but when a dealer receives such a lot he certainly remembers that he wants no more honey from that man. Suppose a dealer would attempt to establish a trade with his customers on this plan, how long do you suppose he would remain in business? The writer has, time and again, been obliged to recrate large shipments of honey, sorting out the different grades and reweighing each case so that he could guarantee it to be all through alike.

I knew of one lot of extracted honey where the cans were filled nearly full of dark amber honey, which was allowed to granulate, and then the cans were filled with white clover honey and sold for white clover! This was a ridiculous trick, but not so awfully much worse than fancy white combs next to the glass with inferior grades in the center. Fortunately there are numbers of producers who do put up on the honest plan, and when we know them we are not afraid to offer the highest market price for their product.

Indianapolis. WALTER S. POUDER.

GEORGE W. YORK & CO.—

Dear Sirs:—Your letter is just received. We note the paragraph regarding the facing of comb honey. We cannot agree with the author of said article. Some time ago we received from a well known bee-man two large cakes of beeswax, to be sold on commission. A few days after receiving the wax we had an order from a bee-supply man for 100 pounds of wax. In getting it ready for shipment we had to break one of the cakes in order to pack properly in the box. Behold our surprise when we found in the center of the cake a stone weighing 11 pounds. We then broke open the other cake, and found another stone about the same weight. This we call dishonest, and we think facing cases of comb honey with white, and filling the center with buckwheat or honey-dew is also dishonest. We think these are parallel cases—one is just as honest as the other. And if we had a shipment of comb honey put up in the manner described, we would sell it on its merits, and would no doubt be sold as dark honey.

We have shippers, not only of honey but of other commodities, that we do not have to open a package in order to sell it if their name is on the package. Why? Because they are known as honest packers.

We may not be any more honest than the average honey-men, but we would not knowingly sell a case of honey to a customer faced up with white honey, for white honey, when we knew the inside was all dark. And to say the least, it is dishonest, and ought not to be encouraged.

Yours truly, C. C. CLEMONS & CO.

Kansas City.

GEORGE W. YORK & CO.—

Gentlemen:—In reference to your letter I would say, first, I do not handle any honey on commission. I now produce my own honey by controlling a large number of apiaries. I have a large fancy trade, and sell more honey than all the other dealers in this city put together. But your letter in question is just what drove me out of handling honey on commission from the producer.

My trade is such that they trust what I say. I never show samples of comb honey, but just sell it as Fancy, or No. 1, at one cent difference in price. I had one party who had sent me his crop to sell for several years. His crop was very white, but not white clover. One year he had a flow from some source of amber honey that lasted about four days, and came right during the white flow. He said nothing about it, but put four or five sections in the middle of about every third crate of 24 sections. It was not quite so dark as buckwheat. I sold several lots of it without opening it, and nearly lost every customer who received it. It was a hard thing to explain away, and was considered dishonest. I then sold it for one cent less on this account; but about two-thirds of the trade who handle pure white comb honey have no use for amber honey at any price. This has to be sold to another class of trade; therefore, mixing comb honey will ruin any fine trade. I stopt that year (1894), and have never handled any honey on commission since. I now have control of the packing of my honey, and know what it is.

Yours truly, WM. A. SELSER.

Philadelphia.

GEORGE W. YORK & CO.—

Dear Sirs:—Regarding the discussion about facing honey and stuffing the centers with imperfect or lower grade of honey—it seems too preposterous for argument that such imposition or fraud would or could be thought by any one as honest, let alone good business policy, besides being very injurious to the reputation and sale of all comb honey, no matter how well put up.

If comb honey is even fairly decently packt as to quality or grade, the buyer is generally somewhat charitable in his views, and expects that the honey on the outside of the cases is somewhat better than the centers, as the proverbial barrel of apples; but when combs only poorly filled, and buckwheat honey, or badly mixt honey, is packt in the center of the cases, showing a rank fraud, then the buyer becomes suspicious, and gets in the habit of wanting to look at the center of any crate he may buy, which, if the rule, would require much more closely grading than has been done before this.

Regarding the sin being less because sent to be sold on commission, we regret that there is not a better feeling or appreciation of the situation on the part of the producers toward the commission merchant. While there are no doubt careless commission merchants that do not make proper effort in showing up, understanding and discriminating in quality, etc., in selling honey, there are worthy commission merchants, and they are a very "necessary article" in working off honey to the best advantage. On the other hand, they are quite often imposed upon by bee-keepers selecting out all their best honey, and sending them only the refuse, or what they can't sell at home.

A commission merchant is practically one and the same as the consignor. It is much easier for the commission merchant to sell "straight goods" than crooked, and much more satisfactory all around.

The commisson merchant's buyer is depending on him, and if the honey "pans out" fraudulently packt, he has either to take it back, sell over again at less price, or to make an allowance, which usually is a severe one, and of course has to be charged back to the consignor.

From our experience and observation we would say to bee-keepers, by all means grade your honey as evenly as possible, and if desirable to pack your cull honey, always pack it by itself, as it then can be sold for what it is, and at much better ratio of price than if mixt up with the whole crop, and thereby lowering the grade of the straight honey more than the entire value of the cull combs. Respectfully,

Albany. H. R. WRIGHT.

GEORGE W. YORK & CO.—

Dear Sirs:—We hardly think that the author of the paragraph you call our attention to (as shown above) meant that he would deceive through the commission merchant, when he would not, in dealing directly with a purchaser, but rather we presume he reasoned the commission merchant will look into the cases, or the parties purchasing will, and consequently be governed according to the contents. Granting this to be the fact, it would then be bad judgment on the part of owner or shipper, as the price obtainable would be little above the value placed on the poorest grade found in the package, the buyer arguing that he had no means of ascertaining the true contents without sorting, reboxing, etc.

Then honey of different grades in the same package does not suit the wants of one person in a hundred, especially is this so in the larger centres; when white is wanted, dark and amber grades will not suffice, or *vice versa*. Our experience (extending over a period of 21 years in this market) is that honey graded so it is alike in each case or package, sells to the best advantage, and has the much-sought-for desideratum of giving the general satisfaction to all concerned. The exposed sections should be just as good as any in the package, and no better.

We often do things (without intent to deceive) in such a way that it has the appearance of deception to others. For instance, we have called attention to a shipment of honey that had different grades in the package; the shipper explained it by saying that he sent it just as it came off the hives—white, mixt, partly filled, dark, etc.—and put the white on the outside just because it lookt the best, supposing everybody would know that all the honey gathered during the summer would not be alike.

Let the face be a true index, and thus have the satisfaction of knowing that we are not likely to cause discredit to come upon ourselves or those who may be concerned with our work.

R. A. Burnett & Co.

Chicago.

George W. York & Co.—

Gentlemen:—Yes, we have noticed the controversies in the bee-papers as to the facing of comb honey. WE ARE IN FAVOR OF EVEN QUALITY IN A CASE. See those capitals? Firstly, if the sections run uneven in showing the stock every one must be examined. Secondly, a prospective purchaser sees the inferior portion of the case—not the superior. That's his business.

We have shippers who turn all their honey over to us, and, when their goods come in, a thorough examination of every section is unnecessary, and we can go to our trade and say, "Here is a lot of honey from ———, and is like the last lot received from him. Can you use it?" He can. This applies to second grade as well as fancy. We know, and the buyer knows, that that man shows up his goods as they are. We cannot imagine what advantage could be obtained by any manipulated packing. This does not imply that a man shipping contrary to the above is dishonest. We are simply debating the question on the ground of the best sale for the stock.

If such a shipper as we speak of be interviewed, he would say that he has always received what his honey was worth. We know this, as we have received just such manifestations of satisfaction. On the other hand, unsatisfactory deals can be traced back either to very poor quality in general, or a certain amount of poor stock that more than counterbalances the attractiveness of the more desirable quantity. It is not so hard with the grocer—he sells a section at a time, and gets a price according to the individual worth. The commission-man can't say to him, "Now, here is a section that you can get 10 cents for, and here is one that you can get 11 cents for, etc." He says, "Here is a lot of honey which I offer you at 10 cents." He knows he can't boost up a price on a lot just because there are a few fine combs in, but knows to the contrary that these few superior sections are very liable to sacrifice. Irregular packing has taught us in nearly all instances to take three or four sections out of every case before we render a verdict. Some shippers always send in regular quality, and those are the men we like to deal with.

Honey shipt on commission direct to the groceryman could run very irregular and still command full value for every section, as he sees every one that is sold.

These are our views, not as honesty, but as policy.

Yours truly, S. H. Hall & Co.

Minneapolis. *Per F. S. Cady.*

George W. York & Co.—

Gentlemen:—Yours requesting our opinion in regard to the paragraph recently publisht in one of the bee-papers relative to the facing of honey shipt on commission came duly to hand, and in reply we beg to say that honey can be shipt as our good friend says, but the question is, Would the shipper be satisfied with the results financially? We desire to say that we have learned in the past 10 years that we have been engaged in the handling of honey, that it is to the advantage of producers of honey to grade and put their product up honestly. We think that if the author of that paragraph would devote about one or two weeks in a commission-house where honey is sold every day, he would change his ideas.

Very little honey is sold nowadays on the facing of it; nine out of every ten people who purchase a case of honey want it opened up, and look into the interior to ascertain its condition, whether it is broken or leaking, or not, and not one person in a hundred would pick out the section in front of the case to learn this information—naturally they will pick it out in the center or towards the back part of the case. What would be the result if the case were packt according to our friend's idea? The purchaser would refuse to buy that case of honey, or any of the same lot.

Most of the buyers of honey want some particular kind; some want only Extra Fancy, while others only No. 1 White, and others only desire the buckwheat. Were a case mixt it would be almost useless to them.

It is just as necessary to take as much precaution in the putting up and grading of honey shipt on commission as that which the honey-producer may sell himself. A good many shippers are in the habit of sending their poorest grade of honey to some commission-man to sell, and keeping their best at home to dispose of themselves, and expect the same price for the poorest quality (markt Fancy) as they get for their *genuine Fancy* which they sell themselves.

The sooner bee-keepers learn to put up their honey honestly, and mark the cases just what they contain, and grade uniformly, the sooner will they realize better prices for their honey.

Very truly yours,

A. B. Williams & Co.

Cleveland. *Per W. L. Geiger.*

Bees in Relation to Flowers and Fruits.

BY THOS. WM. COWAN.

(Delivered at the University Farmers' Institute at Pacific Grove, Calif.)

[Continued from page 357.]

Advantages of Bees.—I am not able in the short space of time available to go into all the modifications which exist for securing cross-fertilization of flowers, but I have already said enough to show the farmer the advantage he derives from bees. I will now try to show how largely we are dependent upon bees for the delicious fruit we enjoy.

If we examine an apple-blossom we will find it contains five stigmas belonging to the five segments of which the core of the fruit is composed. The stigma comes to maturity before the anthers. Bees seeking nectar get dusted with pollen from an older flower and then transfer it to the ripe stigma of a neighboring flower. The apple is strictly a fusion of five fruits into one, and requires no less than five separate fertilizations for its perfect production. If fertilization does not take place the fruit, instead of swelling, drops and rots. It sometime happens that one or more of the stigmas are not fertilized, and in such a case the fruit develops imperfectly and becomes deformed. If such an apple be cut open it will be found that the undevelopt part lies opposite the section where the pit is shriveled.

The flowers of pears are similar in structure, altho they are not so dependent upon bees for fertilization. Small fruits, such as gooseberries and currants, are also dependent upon insects. Among plums sometimes the pollen of one plant is impotent upon the pistils of that plant, and fertilization is only secured by introducing a plant of another variety into the orchard.

In the raspberry the petals are smaller and placed wide apart. There are about 90 anthers, and each of the 60 or 70 drupels carries a stigma, while on the receptacle will be seen a ring of shining dots consisting of nectar. Here the anthers ripen before the stigmas, and a bee, on alighting on the drupels, as she applies her tongue to the dots of nectar gets dusted with pollen, which she carries to another and older flower, and in revolving in an opposite direction transfers the pollen to the ripe stigmas. Each seed thus fertilized develops into the juicy envelope which protects the seed from injury, and makes the fruit so palatable. It requires from 60 to 70 fertilizations to perfect each fruit, and should any of the stigmas escape fertilization the fruit does not develop in that part and remains green and hard. If we look at the strawberry we will find that it required from 200 to 300 distinct fertilizations for its perfect production, and if any of the stigmas do not receive pollen the development of the fruit is arrested in that part and the seed is not produced.

I would here point out that in the strawberry there is a tendency to a separation of the sexes, and that plants bearing large blossoms are frequently tending to become male and produce few fruits, while those of the same variety that produce small blossoms are tending to become female. These are abundant bearers, but produce few runners. Care should, therefore, be exercised in selecting runners, otherwise the male would in time supplant the female.

Bees and Fruit Should Go Together.—I have shown the part bees play in the fertilization of blossoms and the benefits we derive from their labors, but I wish to point out that a danger exists in making a specialty of bee-keeping and cultivating bees in large apiaries, as is the practice in California. It is useless increasing the area under fruit cultivation without at the same time increasing the number of bees kept. As an instance, I would mention Lord Sudeley's fruit plantation in Gloucestershire, England. About 200 acres of fruit-trees were first planted, and for some years there was such poor success that it was a question whether the enterprise should not be abandoned. Lord Sudeley was, however, advised to introduce bees, as it was found that not many were kept in that district. Two hundred colonies, in charge of a practical bee-keeper, were introduced, and the result was magical. Thenceforward the trees bore fruit properly, and the former failure was turned into a success. Since then 500 acres have been planted with fruit trees, and a large jam factory has been started close by both undertakings, being in a prosperous condition.

Every farmer should keep bees, with the primary object of insuring cross-fertilization of his crops, and only look to the honey-yield as a secondary consideration. We are told that bees spoil fruit; but, altho I would show that the structure of the mandibles is such that they cannot pierce the skins, we need not rebut the charge, but point out that, while they gather nectar for themselves, they confer a greater boon on the fruit-grower, for they really give him his crop in return.—Pacific Rural Press. Loudon, England.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Keeping Wax-Worms from Comb Honey.

What is the best way to keep the wax-worms from eating the cappings off comb honey? I have about 500 pounds in shipping-cases stackt up in the second story of my house.

As I am a beginner in the bee-business, and take my honey out of the hives as it is sealed, I will be very glad to have an answer to the above question. Last season the worms damaged my honey very badly. GEORGIA.

ANSWER.—Formerly I had the same trouble if I failed to fumigate my comb honey, but of late years it does not seem necessary. I suspect the reason is that formerly there was more black blood in my bees than now. Where Italian blood predominates there is less likelihood of trouble with worms. In the meantime the question remains what to do in case worms do trouble your surplus honey.

If you examine closely, after the honey has been off the hives two or three weeks, you will find places, especially at the lower edge where the comb is fastened to the wood, where a fine white powder can be seen. This is the work of the little wax-worm, as yet so small you can scarcely see it, and it is well to dispose of it before it gets any larger. Even if you see nothing of the kind, if you are afraid of worms, fumigate your surplus honey two or three weeks after taking it off. Fumigate with sulphur, and it matters little how, only so you get enough of the sulphur fumes to kill. It takes much less fumigation while the worms are small than after they become ½-inch long or more.

Have the honey in a box or room large enough to hold it, and close enough to confine the fumes. A roll of rags may have sulphur rolled in it, sulphur may be thrown on burning coals, or a hot iron can be put in the sulphur. In any case you must look out for fire. A safe way is to have a kettle containing ashes or something of that nature, and sitting in this a smaller kettle that contains the sulphur. You may open up after 12 hours, or you may find no trouble by leaving closed entirely. If you want to be sure, you will do well to fumigate again two or three weeks later, for some of the eggs may hatch out after the first fumigation. A pound of sulphur may be used for 100 feet of cubic space, but if the place is so close as to entirely prevent the escape of the gas, less will do. The only harm that will come of using too much is that some of the combs will be colored green.

Small vs. Large Hives.

DR. MILLER:—I will answer as best I can your questions on page 263.

I have experimented with 6, 8 and 9 frame hives side by side with the same colonies for six years, and I have got the best yield every time from the 6-frame. This spring my 9 and 12 frame colonies had not five pounds of honey when I examined them in March, but the 6-frame had 15 to 20 pounds, and I can surprise you by saying the 6-frame hives in April had more bees than the 9-frame by half; and in a hard season I have got surplus from the 6-frame colony while the 9-frame did not fill their brood-chamber.

You admit that to place two swarms of equal size, one in a 6-frame and the other in an 8-frame hive, that the 6-frame would give the most surplus. *Very true indeed.* Then please tell me what are we keeping bees for if not for the greatest amount of section or surplus honey. I am not speaking of a warm climate where they get honey the year round, but a climate such as you and I have. We have no need of large hives except we have them so arranged as to contract or expand.

You mistook some of my figures. My top-bars are 1⅛ inches wide instead of 1⅓. You see, I could not get six frames 1½ inches wide and leave bee-space in a 8¾-inch space, see?

I will try several hives this season—the Danzy, Root chaff, the Champion, the St. Joe, the Hill, and some of my own make; but as I am depending altogether on hired help, I do not expect to get as good results. I am still unable to attend to any work on account of erysipelas in my leg. I have had a very serious time of it; have not done any work since I returned from the Buffalo Convention, but I hope to cheat the grave and undertaker for a good while yet. I hope, Doctor, that you will have another good season. It is very backward here now. DAVID N. RITCHEY.

Franklin Co., Ohio.

ANSWER.—According to Mr. Ritchey's figures he ought to have no difficulty in deciding that 6 frames in a hive are enough for him. But there comes C. P. Dadant, who says twice 12 gives none too much room. I hope Mr. Ritchey will soon recover and be in good working trim, and then it might be very interesting if he and Mr. Dadant could compare notes.

Transferring with Tight Bottom-Board.

I have a colony which I want to transfer two weeks after it swarms, but the bottom-board is nailed on so tight that it is impossible to get it off. Is there any way to drum out the bees without taking the bottom off? NEW JERSEY.

ANSWER.—If there is no chance for the bees to get out except at the entrance—top and bottom being nailed on solid—you may still succeed in drumming them out. Set the hive so the opening shall be at the top, that is, if the entrance is at the bottom, turn the hive upside down, giving them a little smoke. Then plug up the entrance and hammer on the hive till you can hear the bees buzzing loudly. Then open the entrance and hammer away for dear life, and the bees may rush out in a stream ready to enter any hive or box placed over. If, however, they do not come out freely after a lot of drumming, just tear off the bottom in the same way you would if there were no bees in the hive, for by this time the bees will not resent anything of the kind, and after taking off the bottom you can proceed in the same way you would have done had no bottom been nailed on at the start.

Prevention of Swarming, Etc.

I am peculiarly situated. A, B, C, D are the corners of a flat roof on which I have my bees. A, B and B, C are walls about 12 feet from A, D, which is the line of my lot. My bees, when they swarm, have invariably gone across that line on the adjoining lot. I have tried to prevent them but they will go. The lady who owns the lot has gotten tired of it, and has forbidden me to take any more swarms from there. I have about all the swarms I care for, and would like to prevent them swarming any more.

1. If I examine them every 12 days during the swarming season, will that prevent it by destroying all queen-cells?

2. If I do so, will not the queen crowd the brood-nest so that the workers could not have room to deposit enough honey there for winter stores, as most of my hives are 8-frame?

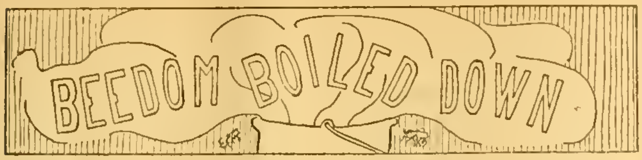
3. Can you suggest any means that would induce them to alight on my own lot? IOWA.

ANSWERS.—1. You cannot entirely rely upon killing cells every 12 days. Once a week will be better, providing you don't miss any cells, but sometimes they'll swarm without waiting.

2. It will probably make no difference. There will, perhaps, be as much crowding of the brood-nest in one case as the other, altho in any case there may be a little trouble about scarcity of stores in an 8-frame hive.

3. You might succeed in getting them to alight on your own lot by putting there a decoy hive—that is, an empty hive with one or more empty combs in it. You might have your queens clipt, and then no matter where the bees clustered they would come back of their own accord. You might put a queen-trap on your hives. You might run for extracted honey and give your bees so much room they wouldn't care to swarm.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all others possible to subscribe for it. See premium offers on page 377.



Painting Hives.—W. C. Gathright says it may be all right in the East to have unpainted hives, but in New Mexico "unpainted hives are soon warpt, crackt and ruined."

* * *

The German, Austrian and Hungarian Bee-Keepers' Association—the society which holds such large and enthusiastic meetings as American bee-keepers never dream of—will have its 43rd annual convention this year at Salzburg, Austria, Sept. 4 to 8.

* * *

The Comb-Foundation Business is no small affair. In Revue Internationale Chas. Dadant & Son report that their sales of foundation, which in 1895 had gone down to 30,000 pounds, and in 1896 to 28,000 pounds, in 1897 rose to 52,000 pounds. If it averaged eight feet to the pound, this would make the output of 1897 cover nearly eight acres of ground.

* * *

Room to Prevent Swarming.—Doolittle is very positive, (Progressive Bee-Keeper) that Quinby was right when he said "a large amount of room filled with empty combs will entirely prevent swarming." Doolittle says he has proved it hundreds of times, but says the room without the *empty comb* will not do. Editor Root stipulates that the empty comb must be given *before* the bees have contracted the swarming-fever.

* * *

Taxing Bees.—In his county in Iowa, O. P. Miller says bees are put on the tax list and are valued at $2.00 a colony if a man has more than 10 colonies. He thinks this inconsistent, for the laws of Iowa say, "All animals over six months old shall be taxt according to their value, except dogs; they shall be taxt per capita;" according to which the queen is the only taxable member of the colony.—Progressive Bee-Keeper.

* * *

Time for Sealing Brood.—G. M. Doolittle takes R. C. Aikin to task (in Progressive Bee-Keeper) for saying that when a queen is removed "the seventh day will find just about all the worker-brood sealed." He makes a general appeal to bee-keepers to make observations on the subject—sure that nine days will be found to be the correct time—three in the egg and six in the larval form. Cowan gives three days for the egg and five for feeding a queen or worker; six for a drone.

* * *

Bees Swelling.—R. C. Aikin asks, in Progressive Bee-Keeper: "Did you ever notice how a colony seems to swell when a flow comes on? How a colony that seemed comfortable in its hive before this, now cannot find room to work, so piles out of the hive?" Doolittle explains that it is a real swelling in the size of the bees that stay in the hive, because they receive from the field-bees the loads of nectar for evaporation, thus becoming so large that two bees now take the same amount of room that three or four previously did.

* * *

Mashing Combs Between Rollers and then separating the honey and melting the wax, as suggested by R. C. Aikin, at Buffalo, was spoken of by Gleanings as a rather startling idea. Bee-Chat reminds Gleanings that the same thing was reported five or six years ago as being practiced by one of the correspondents of Gleanings, and adds: "It is well known that our Scotch friends have for many years used honey-presses for removing their heather honey, which is so thick that no extractor can force it from the cells after it has been stored a few days in the combs."

* * *

Prevention of Swarming.—R. C. Aikin (in Progressive Bee-Keeper) tells how he manages to get the start of the bees, and then gives a short cut as follows:

"Take two brood-chambers for your colony. Eight or ten days *before* the flow, put the brood all in one of the chambers and the queen in the other with an excluder-zinc between. The queen will be more contented and lay more promptly after the change if a comb with a little brood is put in her chamber. She accepts this as her brood-nest, whereas if removed from all brood, she labors to pass the zinc to the brood. As previously explained, the brood in the part from which the queen was excluded will all be sealed by the eighth day. Now, the eighth day or after, just make a new colony with the chamber having the queen and put her on a new stand. This leaves the old stand with sealed brood only, hence impossible to build cells. In three or four days a cell or queen, better a ripe cell or virgin queen, can be introduced to the old stand. If a cell, your young queen will not lay till all brood is hatcht, *just as in natural swarming*. This reduces the labor fully one-half, and I think just as good in every respect. I expect to practice this method the present season, 1898."

* * *

Box vs. Frame Hives.—A somewhat animated controversy has been taking place in Revue Internationale between two octogenarian leaders—Messrs. Dadant and Boyer. It is not probable they will be in entire accord at the close of the controversy. The showing M. Boyer makes of the cost of a movable-comb hive with its accompaniments is rather discouraging. He gives it as follows:

Hive, $5.40; freight, 20 cents; cushion, 40 cents; painting, 40 cents; foundation, $1.00—total, $7.40.

Certainly hives must cost a good deal more in the French than in the English language, according to this showing, a showing that does not, however, agree with the statements of Mr. Dadant.

* * *

Simmins' Direct Fasting Method of introducing queens is thus given in his paper, Bee-Chat, remembering that the bees must have been queenless three days:

1. Keep the queen quite alone for not less than 30 minutes, without food, but warm.
2. Insert after dark, under quilt, first driving the bees back with smoke.
3. No further examination is to be made until after 48 hours have expired.
4. Make no division of, or nucleus, from the hive within three days prior to insertion, unless the original queen is then left on her own stand.

CAUTION.—As many queens are ordered for inserting with a divided half of a colony, it should be pointed out that the old queen must always be left on her own stand, and the new queen given to the removed part, unless three days are allowed to intervene.

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for $1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at $1.00), and 10 cents extra.

◆

The Wood Binder for holding a year's numbers of American Bee Journal, we propose to mail, postpaid, to every subscriber who sends to us 20 cents. It is a very simple arrangement. Full printed directions accompany each Binder. Every reader should get it, and preserve the copies of the Bee Journal as fast as they are received. They are invaluable for reference, and at the low price of the Binder you can afford to get it yearly.

◆

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

◆

The Names and Addresses of all your bee-friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums we are offering. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.

◆

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

California has been blest of late with two fine rains. These will be of signal service to the orchardist, in increasing the water for irrigation, and in thoroughly wetting the earth twice in late spring. But they are too late to very greatly help the grain crop, and it is feared the same will be true of the honey product. It is to be hoped that the bees will produce enough honey to feed them. So wrote Prof. Cook, May 30.

◆

Bee-Business Enlarging.—In a letter from one of the largest dealers in bee-keepers' supplies, written us recently, we find this significant sentence:

> "It looks as if there was a general need of enlargement if the bee-business is going to increase as it has the last two years."

We presume unless the present manufacturers of supplies prepare to take care of the increasing demand, others will engage in that line of business, and to the benefit of all concerned. This country is developing in all its industries, and there is no good reason why the bee-business should not keep pace with the rest. The population is already here to consume every pound of honey that possibly can be produced, and at a fair price.

◆

A Bee-Bed of Flowers.—Mrs. Effie Brown, the conductor of the apiarian department in the Northwestern Agriculturist, writes thus about a bee-bed of flowers:

> When we plant our posies this spring we are going to have one bed especially for the bees.
>
> All flowers do not yield nectar, and many that do are never visited by the bees on account of the depth of the honey-cups. The rose, lilac, violet and snow-ball are among the latter class. I think the flower that yields the most nectar to each blossom is the spider-plant. It is a hardy annual, blossoming in July and August. The blossoms are beautiful, odd little things with the petals all on one side, and long, spidery legs on the other, one sometimes containing enough nectar for two loads for a bee. These seeds we will plant in the center of our bee-bed because they are taller than the other plants which we will use. Around the patch of spider-plants we will sow a good broad band of mignonette. Every one loves this sweet, old-fashioned flower, and the bees delight to work on it from morning till night. All around the outside portulacca, or, as grandmother calls them, "moss-roses" will be sown. One of the prettiest sights in nature is a bed of portulacca in full bloom, with dozens of bees hovering above, or resting in the hearts of the flowers.
>
> I have never been able to discover whether or not they get very much honey from this plant, but I think I never saw so many bees to the number of blossoms as I have seen on a "moss-rose" bed.
>
> Every bee-keeper ought to sow one of these bee-beds—not only for the enjoyment of the bees, but for his own pleasure.

While it requires a good many flowers to be of perceptible use to bees, still when planting even small garden beds of them, one may as well plant the varieties that yield nectar, especially when they are pretty as well.

◆

Bee-Paralysis or Nameless Disease.—Prof. A. J. Cook, of California, writing us May 30, had this to say about a disease affecting the bees around San Francisco:

> A well-known bee-keeper near San Francisco describes a disease that is affecting his bees quite seriously, but only a few colonies. It is, without doubt, the "nameless bee-disease" of some, or "bee-paralysis" of others. Is there any better way to treat this disease than to introduce a young vigorous queen? I think it would be well for the American Bee Journal to ask for the experience of all on this disease. It is not usually very serious, and, so far as I have observed, goes away of its own accord, before very long. A. J. COOK.

We shall be glad to publish anything relative to the disease, or diseases, referred to by Prof. Cook. Who can give something that will help?

◆

Chas. F. Muth.—A few weeks ago we announced the death of Mr. Muth, of Cincinnati, by suicide. Since then we have learned some of the particulars which we will give in connection with a few items of interest relating to Mr. Muth and his career as a bee-keeper and dealer in honey.

From the Cincinnati Commercial Tribune of May 17, we take the following, mainly relative to the sad death of Mr. Muth:

> The news of the death of Charles F. Muth, for years past one of the city's prominent business men, came yesterday as a shock to his personal friends and acquaintances.
>
> He was found dead on his farm near Morristown, Ind., under circumstances tending to show that in a spell of mental depression he had taken his own life.
>
> For some months past he had been feeling unwell, and at times appeared to be suffering from melancholy. He had suffered two attacks of sunstroke a few years ago, never quite recovering from the effects, and his family attribute his recent fits of depression more to that cause than anything else. Nevertheless, last Saturday, when he informed them that he intended going to spend a few days on his farm near Morristown, they opposed it, and tried to persuade him to remain at home. He persisted in going, however.
>
> He spent Sunday examining at the grounds and houses on the farm, a tract of some 600 acres, and when last seen Sunday night by the man in charge of the place, was engaged in writing, and gave no signs of trouble.
>
> Yesterday morning he did not appear, and at 10 o'clock the man in charge, tired of waiting for him, went to the little room he had fixt up as an office in the farm-house. A horrifying sight met the man's eyes as he pusht open the office door.
>
> Mr. Muth was seated on a couch with a rifle between his legs, a gaping bullet hole under the jaw, and another over the right eye. The rifle had evidently been held under the chin while the fatal shot was fired, and the bullet had ranged up through the skull, causing instant death.
>
> Mr. Muth was in his 64th year. He was born in Hesse, Germany. Coming to America in 1854, he engaged in the

tobacco business at Baltimore with a relative, but after a short stay there concluded to go further west. His first situation in Cincinnati was with Henry Franck, the pioneer grocer. With him he remained a year or two, then went to the Far West and tried mining and cattle raising. Not meeting with success, he returned to Cincinnati again. In a short time he was in business for himself as a dealer in honey and bee-keepers' supplies. For many years he was one of the largest dealers in the West in that line of trade, and did an extensive business in the West and South. He was active in extending it up to the time of his death, tho in the past year or two he had suffered reverses. This fact, it is believed, caused in part the melancholy that markt him for some months past. The losses, however, were not serious, not more than $12,000, it is said, but it appeared to wear on him.

Mr. Muth was a Mason, and a member of Hanselmann Lodge. He took an active interest in the German Orphan Asylum, and served as President of its Board of Managers for some years.

He was prominent in politics at various times. At the last election he was elected on the Fusion ticket as a member of the Board of Control.

Mr. Muth married Miss Caroline Muth, who was his cousin, and there are six children surviving him with the widow.

The body was brought to the city last evening, and burial will take place to-morrow.

The letter which Mr. Muth wrote Sunday night was found yesterday in the room in which he was found dead. It is as follows:

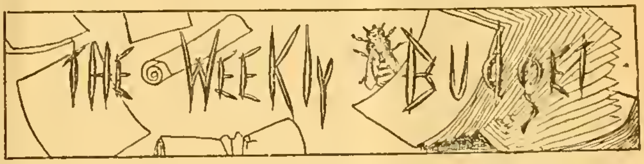
> If I should die on my farm it is my wish that I be buried in the same graveyard with August Muller, and in the same simple manner. My family will respect my last wish. My honest debts must be paid. CHAS. F. MUTH.

It will thus be seen that he contemplated the act. August Muller was an uncle, and was buried in a country graveyard adjoining the Muth farm.

In Gleanings for June 1 we find these paragraphs written by Mr. A. I. Root, who knew Mr. Muth well:

> Our friends may remember that, when I first became interested in bee-culture, I very soon made inquiry in regard to the various bee-journals publisht in the United States or other parts of the world. I think my first acquaintance with Mr. C. F Muth came through my desire to know something of bee-keeping in Germany. He was very willing to give me all the information in his power, and for many years we offered the Bienenzeitung to our German readers through Friend Muth's kind services. We had become quite well acquainted through correspondence, and I had promist to make him a call and see his apiary on the roof of his store. One day, however, I was surprised to meet a tall, fine-looking man who spoke English quite brokenly. He introduced himself as "Mr. Moot, of Cincinnati." He told me we had had some little correspondence, but somehow I did not quite catch on; but when I saw his name on some circulars, "Muth," then I knew him at once, and we shook hands over again, and took another start. He brought along some of his famous honey-cake. I took him over home and introduced him to Mrs. Root and the children. Then he sent me a lot of his honey-jars and tumblers in which he sold the honey in such immense quantities. Many of our readers, especially the older ones, remember how ably Friend Muth stood at the head and represented bee-culture in America among the German people. When I spoke of making him a visit, or putting the street-number on his letters, he said everybody knew him in Cincinnati, and I guess this was pretty nearly true—at that time, anyhow.
>
> Mr. Muth was one of the cleverest, most whole-souled and generous men I ever knew. He tried to be right and fair; but when he met somebody who wanted to be unfair, or even if he got it into his head that somebody was trying to get more than was just, he sometimes showed that his good nature *might* give place to something quite different. Of late years I have felt that our jolly, whole-souled friend had too much business on his hands. I have heard him speak a good many times about that farm, alluded to in the extract above; and I fear, from what I have heard from those who had sent him money, that of late his prompt, energetic business habits have not been quite up to their former standard.
>
> In view of the injury by sunstroke, he should have been careful about undertaking too much business. I fear our poor friend brooded over his financial affairs, and imagined they were worse than they really were. From the statement given above I infer that, after everything is settle up, there is a large property still for his wife and children. How gladly they would have borne his cares and troubles, and let him take things easier had he permitted them so to do! The bee-keepers of our land can remember our departed friend with grateful feelings for what he has done to bring about the present advanced state of bee-culture, especially in the way of selling, and getting it into the regular channels of trade. Even if some of the friends have suffered somewhat by neglect, they may learn by the above that our old friend had been for years a sufferer; and we can afford to let a broad charity help us to forgive and forget whatever was not exactly as it should have been. A. I. ROOT.

We think we can scarcely add anything of interest to the foregoing. We remember very distinctly meeting Mr. Muth at the World's Fair convention, and the part he took in some of the discussions. He was for years one of the American Bee Journal's best friends, and in his death we feel that we have lost not a little.



MR. L. W. LIGHTY, in American Gardening, says that "the man who rides hobbies and runs after fads in bee-culture will have a lean bank account."

MRS. MATE L. WILLIAMS, editor of the department of the apiary in Farm, Stock and Home, reported, June 2, the severe illness of her daughter who is her assistant in the apiary. We trust she may speedily recover.

MR. J. E. CRANE (in Review) thinks the swarming propensity can be bred out of bees with less labor and time than it has taken to get non-sitting hens. The simple fact that bees differ greatly as swarmers makes the case look hopeful.—Gleanings.

MR. GEORGE KORNRUMPF, of Kinney Co., Texas, wrote us June 3:

"I am going to the Phillippine Islands as one of Uncle Sam's boys. If the Phillippine Islands are a good place to keep bees, I will likely take the fever."

MR. E. E. HASTY says, in the Review, that he won't have his picture taken, because when he did the picture always lookt sleepy. The idea of a man looking sleepy who writes so wide-awake! Say, Hasty, you'll have to show us the picture if you don't want your reputation for veracity shattered.—Gleanings.

MR. GEO. W. HUFSTEDLER, of Bee Co., Texas, the President of the National Queen-Breeders' Union, writing us June 4, said:

"Bees are booming this season so far here. Mesquite is just coming into blossom now, and the prospect for a heavy flow is fine."

DR. A. B. MASON, Secretary of the United States Bee-Keepers' Union, wrote us May 30 that he, as Secretary of the Union, recently effected a settlement with a large city honey-dealer for over three tons of honey that had been shipt him last fall by a member of the Union. You see it pays to belong to the new Union.

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 20 cents; 100 for 35 cents; or 200 for 60 cents.

FOR THE READERS OF THE AMERICAN BEE JOURNAL.

PROFITABLE BEE-KEEPING,

—WITH—

HINTS TO BEGINNERS.......

By Mr. C. N. White, of England,

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

Mr. White is owner of one of the largest apiaries in the country where he lives, and has made a life study of the subject. He is also lecturer, under the Technical Education Scheme, to several County Councils in England. He will treat the subject in a

Series of Nine Illustrated Articles:

1. General and Introductory.
2. Bees.
3. Handling Bees.
4. Swarming.
5. Hives.
6. Foundation.
7. Supering.
8. Diseases.
9. Wintering

This will be a series of practical articles that bee-keepers of the United States will not want to miss reading. They are copyrighted by Mr. White, and will appear only in the AMERICAN BEE JOURNAL, beginning in July.

We want our present readers to begin at once to get their neighbor bee-keepers to subscribe for the Bee Journal for the last six months of 1898, and thus read the articles by Mr. White. In order that all may be able to take advantage of this rare opportunity to learn from a successful and practical English authority on bee-keeping, we will send the American Bee Journal for

The balance of 1898 for only 40 cents—
To a NEW Subscriber—thus making it

SIX MONTHS FOR ONLY FORTY CENTS—

Which can be sent in stamps or silver. If you are a subscriber already, show the offer to your bee-keeping neighbors, or get their subscriptions, and we will give YOU, for your trouble, your choice of ONE of the following list, for each NEW 40-cent subscriber you send:

For Sending ONE New 40-cent Subscriber:

1 Wood Binder for a Year's Bee Journals
2 Queen-Clipping Device
3 Handbook of Health—Dr. Foote
4 Poultry for Market—Fan Field
5 Turkeys for Market—Fan Field
6 Our Poultry Doctor—Fan Field
7 Capons and Caponizing—Field
8 Kendall's Horse-Book
9 Mullen's Horse Book
10 Foul Brood—by Dr. Howard
11 Silo and Silage—by Prof. Cook
12 Foul Brood Treatment—by Prof. Cheshire
13 Foul Brood—by A R Kohnke
14 Muth's Practical Hints to Bee-Keepers
15 20 "Honey as Food" Pamphlets
16 Rural Life

For Sending TWO New 40-cent Subscribers:

1 Potato Culture—by T. B. Terry
2 Green's Four Books
3 Ropp's Commercial Calculator
4 Dr. Tinker's Bee-Keeping for Profit
5 40 "Honey as Food" Pamphlets
6 Winter Problem in Bee-Keeping—by Pierce
7 Hutchinson's "Advanced Bee-Culture
8 Dr Brown's "Bee-Keeping for Beginners"
9 Bienen-Kultur—German
10 Bees and Honey—160 pages—by Newman
11 People's Atlas of the World

Please remember that all the above premiums are offered **only** to those who are now subscribers, and who will send in new ones. A new subscriber at 40 cents cannot also claim a premium; but we will begin the subscription just as soon as it is sent in, which will secure several June numbers in addition to the last 6 months of this year, provided the subscription is forwarded to us **at once.**

If you want your bee-keeping neighbors to be CERTAIN of getting ALL the numbers of the last 6 months of 1898, you had better get their subscriptions in **before July 1,** as we may run out of copies before the end of that month.

Now, let every one go to work, and help roll up the largest list of subscribers the old American Bee Journal ever had. It can easily be done if ALL who possibly can get a few new subscribers will kindly do so.

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I make the rearing of Queens a specialty. Untested, either 3 or 5-banded, 65 cents each. Tested, 95 cents each. **DANIEL WURTH,** Falmouth, Rush Co., Ind. 24A3t

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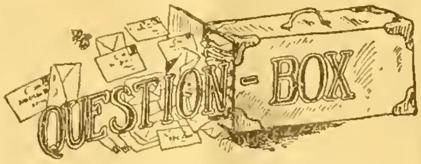

In the multitude of counsellors there is safety.—Prov. 11-14.

Honey Stored in New Foundation Combs vs. that Stored in Combs of the Previous Year.

Query 73.—Suppose in an extracting-super half the frames are filled with foundation, and the other half with combs fully built out and used the year before, but never used for brood. The honey is extracted after all is sealed. Which will yield the best honey, that starting with full combs, or that starting with foundation, or will there be no difference?—Tenn.

J. A. Stone—No difference.

E. S. Lovesy—In our locality no difference.

Rev. M. Mahin—There would be no difference.

Chas. Dadant & Son—No difference as far as we know.

J. M. Hambaugh—I think there will be no difference.

Dr. A. B. Mason—In experimenting last season with some of Root's drawn

Van Deusen Thin Foundation...

We have several 25-pound boxes of Van Deusen Thin Flat-Bottom Comb Foundation for sale, at $12.50 per box. This Foundation is preferred by many. As we have only a few boxes of it, an order for same should be sent promptly. Address **The A. I. Root Co.** 118 Michigan Street, Chicago, Ill.

Bee-Hives, Sections, Shipping-Cases—everything used by bee-keepers. Orders filled promptly. Send for catalog. MINNESOTA BEE-KEEPERS' SUPPLY MFG. CO., Nicollet Island, Minneapolis, Minn.

BEES! Florida Italian QUEENS!

Tested Queens, $1.00 each; Untested, 50c. Prompt and satisfactory dealing.

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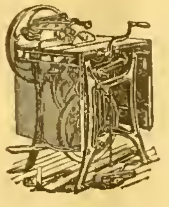

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Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery Sold on Trial. Catalogue Free.

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"He fools his customers by sending more than is expected."—See page 105 current volume Bee Journal, and ask for the free pamphlet referred to. I am now prepared to fill orders promptly with FINE YELLOW-TO-THE-TIP **QUEENS**, or daughters of imported stock mated to golden drones, at 75c each. Purely-mated Queens reared from the best stock and by the best method known, is what I furnish, and will prove it to all who give me a chance. Money Order Office, Warrenton.

Address, **W. H. PRIDGEN.**
22Atf Creek, Warren County, N. C.
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Italian Bees in 8-frame Langstroth hives. Per colony $5.00; 5 or more at one time $4 50 per colony. I have only a limited number for sale. They are strong colonies, and ready for business. Address, **W. H. WATTS,**
19Atf **Ross, Lake Co., Ind.**

Excelsior Incubator and Brooder Cheap.....

200 eggs capacity. Good as new. Used for only two batches. Everything complete. Will sell it for **TWENTY DOLLARS**, half the cost price
Address, **P. W. DUNNE,**
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Best honey-gathering strain in America. Tested, $1.50. Untested, $1.00. Write for a Circular. **J. D. GIVENS, Lisbon, Tex.**
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QUEENS Italian stock. Untested, 70c each; 3 for $2 00. After July 1, 50 cents each; tested, $1.00 each. **Root's Goods at Root's Prices.** Prompt shipment and satisfaction guaranteed. Catalog free.
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Ten years' experience with the best of methods and breeders enables him to furnish the best of Queens—Golden Italian—Doolittle's strain—warranted purely mated, 75c each; 6 for $4. After June, 50c; 6 for $2 75. Leather Colored same price. Safe arrival. Will run 1,200 Nuclei, so there will be no waiting for your Queens. 23A16t
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foundation, comparing it with comb used before, our family were unable to discover any difference.

E. France—I don't think there would be any difference.

Dr. C. C. Miller—There hardly ought to be any difference.

Eugene Secor—I doubt whether any one can tell the difference.

P. H. Elwood—I should not expect any appreciable difference.

O. O. Poppleton—I don't think any difference can be detected.

Emerson T. Abbott—A good way to find out would be to try it.

Prof. A. J. Cook—I do not believe there would be any difference.

Dr. J. P. H. Brown—The best honey will be in the combs built on foundation.

Mrs. J. M. Null—If excluders are used, and the kind or source of honey the same, there will be no difference.

S. T. Pettit—If the combs were dried by the bees the previous fall, there will ordinarily be no difference, unless that starting with foundation should take up a soapy flavor.

D. W. Heise—Why, I would expect the latter to be the best. It is from the fact that in the latter the honey would be stored somewhat slower, and therefore would be better ripened.

G. W. Demaree—I have never discovered any difference in the quality of honey gathered at the same time, and under the same conditions of weather, no matter what the age of the combs were.

C. H. Dibbern—There will be some difference in favor of the foundation, as it will be better ripened, but I do not know that the difference is sufficient so that it could be readily noticed in the honey.

R. L. Taylor—If the honey-flow is slight there will be no difference; but if abundant, that in frames with foundation will be better, because it would not be as well cured in the comb on account of its being stored there more rapidly.

J. E. Pond—I can't see where there can be any difference. The conditions are so nearly similar that in theory one might decide either way. Is the matter of enough importance to make a test during the coming season? If so, let some one try it and report, and thus settle the matter.

G. M. Doolittle—The way you put it, the last year's combs would have their cells so lengthened that the foundation would have little honey in it, if the cells were drawn out at all. If the cells were drawn so the honey was deposited in them, the difference between this and that in the last year's combs could not be detected by one not in the secret.

Mrs. L. Harrison—If the comb is very white there would be but little difference. One season in preparing extracted honey to compete for a premium at the State Fair, I extracted only from white comb. My honey drew the premium, being lighter in color. The other exhibitors thought there was some trick about it, as theirs was all alike. I explained the "why." Colored combs will, to some extent, color the honey.

Sweet Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Sweet Clover (white).	.60	$1.00	$2.25	$4.00
Alsike Clover.........	.70	1.25	3.00	5.75
White Clover...	.80	1.40	3.00	5.00
Alfalfa Clover.........	.60	1.00	2.25	4.00
Crimson Clover	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.
Your orders are solicited.

GEORGE W. YORK & Co.
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Young Tested Italian Queens For 75c each.....
I have a fine lot of them, and can fill orders **promptly.** Address,
F. F. MORROW, Wallaceburg, Ark.
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Send for our new catalog.
Practical Hints" will be mailed for 10c. in stamps. Apply to—
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Golden Italian Queens Cheap!

Two-frame Nucleus, with Queen, $2.25.
If you want **BEES FOR BUSINESS**, send for my Catalog of prices. . . . .
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For Meeting Baptist Young People's Union,

At Buffalo, N.Y., July 14-17, the Nickel Plate Road will sell tickets at rates lower than via other lines. The accommodations are strictly first-class in every particular, and it will be to your advantage to communicate with the General Agent, 111 Adams Street, Chicago, before purchasing your ticket. Telephone Main 3389. (28)

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

New Train Service to Buffalo

Nickel Plate Road train No. 6, from the Van Buren Street Passenger Station, Chicago (on the Loop,) 2:55 p.m., daily, with Buffalo sleeper, arriving in that city at 7:40 the following morning. Through New York sleeper on the same train, via Lackawanna Road, Buffalo to New York, arriving early next evening. Three through trains daily, at convenient hours, to Fort Wayne, Cleveland, Erie, Buffalo, New York and Boston. Rates lower than via other lines. City ticket office, 111 Adams St., and Auditorium Annex. Tel. Main 3389. (33—24-2)

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CENTRAL MUSIC HALL, CHICAGO.

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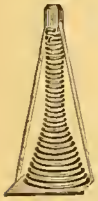

Queen-Clipping Device Free

The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 30 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

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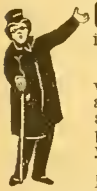

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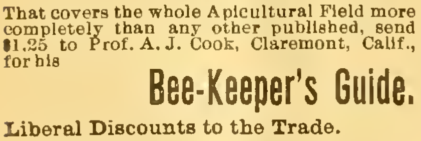

England and Russia

want to be considered friendly. But they can't offer us such safety from interference as is afforded the flock by **intervention of Page fence.**

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

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GENERAL ITEMS

White Clover Blossoming.

I wintered all my bees out-doors and all came through well and are doing fine. I had two swarms this week. White clover is just coming into blossom. The prospects for a good flow are fine.

P. D. Wine.

Cherokee Co., Iowa, June 4.

Working on the Mustard.

White clover is just beginning to show here and there. Bees are working on mustard at present, which affords no surplus, but allows the bees to "fatten up" for white clover. H. G. Quirin.

Huron Co., Ohio, May 3.

Bees Starvin

You may count this place a blank on honey production this year. Bees are in a starving condition now, and will have to be fed if they survive the season. We have had some showers but they came too late to affect the honey crop. The grain and hay prospects have been improved, and fruits never lookt better.

J. M. Hambaugh.

San Diego Co., Calif., May 30.

Good Crop Expected.

The bees are as busy as they can be, and they hum as loud as they know how. The fruit-bloom of all kinds was just immense. Now the red raspberries are in bloom, and the white and Alsike clovers are in blossom in great abundance; basswood is budding full for the first time in two years. I had 18 colonies, spring count, wintered in chaff hives, with the loss of one colony. I had one new swarm May 15, but none since. I expect another any day.

Long may the American Bee Journal live and prosper. I could not do without it. I have over 50 colonies to look after this summer. I. D. Hyde.

Washtenaw Co., Mich., June 8.

Fetid Marigold.

I send in a little box a nameless weed, and two little samples of honey, the larger bottle having the honey which is affected by the weed, and the smaller one is this season's honey which I would like to have your opinion of, as to the quality. We think it very fine, mostly white clover. The natives here claim that the bitter weed honey is fine for coughs, colds and such like, and keep it always on hand for that purpose. If you should find any merit in it, and some of your druggists would take hold of it, I could furnish quite a lot of it by August or September. Our honey now in a month or six weeks will have a bitter taste from the weed.

J. Harvey Davis.

Avoyelles Co., La., June 1.

[We referred the plant and honey to Mr. D. S. Heffron, an old-time botanist, and now a bee-keeper, who reports as follows:—Editor.]

I have somewhat carefully examined the little plant sent you by Mr. J. Harvey Davis. If I do not mistake, it is named

California ⁂

If you care to know of its Fruits, Flowers Climate or Resources, send for a Sample Copy of California's Favorite Paper—

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Dysodia chrysanthemoides. It is very fully described by both Dr. Asa Gray and Prof. Wood. The plant seems to differ slightly only in one particular from the descriptions of the authors, and I think the very dried condition of the specimen was the cause.

The plant is found all the way from the Southern part of this State to Louisiana. It is quite bitter to the taste, and ill-smelling, which Dr. Gray says gives it the common name of "fetid marigold." The bitter principle undoubtedly makes a good tonic for colds and common bronchial coughs. Doubtful if there is any money in it, unless one has $15,000 or $20,000 with which to advertise it.

D. S. HEFFRON.

Rainy During Fruit-Bloom.

It has rained here nearly all the time for six weeks. Nearly all the apple-bloom and other flora was lost.

HENRY ALLEY.
Essex Co., Mass., June 3.

Bees Moving Eggs.

Do bees move eggs? This question I find answered in the affirmative to-day. A comb for seven days separated from the queen by a queen-excluding honey-board, shows a queen-cell with an egg in it. All the other cells have capt brood, and very large larvæ, but no eggs.

H. ROHRS.
Rock Co., Wis., June 3.

No Honey to be Had.

I had three swarms May 16, but there is no honey to be had, and swarming is at a standstill. But bees are all right yet.

CHARLES LEHNUS.
Kankakee Co., Ill., June 6.

White Clover Scarce.

Our 162 colonies of bees are in about as good a condition now as any year we have kept bees. All wintered without loss. Two this spring came up missing. All but one or two will be strong enough to gather white clover honey, and store in the sections, but white clover will be rather scarce—not quite so much as last year—and we thought it scarce last year, it being our principal honey crop.

MRS. L. C. AXTELL.
Warren Co., Ill., June 4.

Bees and Poultry.

I make a specialty of bees and poultry. I have kept bees at this place 33 years, and produce from 4,000 to 10,000 pounds of comb honey a year. I have about 2,000 pounds of white honey on hand now, which is nice and dry, in 12-section cases.

Clover is very short in this locality. Plenty of it came up this spring from the seed, but will be of no use this season. No swarms yet. Our fall bloom is usually good here, from Spanish-needle, heart's-ease and golden aster.

SYLVESTER PAGE.
Carroll Co., Ill., June 4.

Honey in Preference to Swarms.

We have quite a few bee-keepers here, some having as high as 50 colonies, but I can beat them all on producing honey per colony. One neighbor across the river here had 45 colonies, spring count, and he had his first swarm May 25, and

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they have been swarming ever since. It makes him feel glad to have a swarm before I do, but I askt him if he had any honey yet, and he said no. So I told him to come over and I would show him some new honey. I have about 100 pounds of honey stored in the sections. I have only six colonies, but I don't let them swarm. I give them lots of room.

A. WURFEL.

Marinette Co., Wis., June 5.

* * *

Cool Weather.

I came here this morning with 117 pounds of comb honey, and sold it. I drew it from four hives on the 29th. Our flow is not as good as last year. Honey-blooms are limited this year, except sourwood, and yellow, or chittim, wood. Nearly all of April was cool and cold, four days of cool weather in the full moon in May. There is very little swarming this season. By the middle of July our summer harvest will be over. The cool weather was our drawback this spring.

JOHN M. RYAN.

Morgan Co., Ala., June 1.

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To Buffalo, N. Y., and return, account Baptist Young People's Union meeting, July 14-17. Rates lower than via other lines. For full information call on or address J. Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone 3389 Main. (30

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6.	Dr. Howard's Foul Brood Book	1.10
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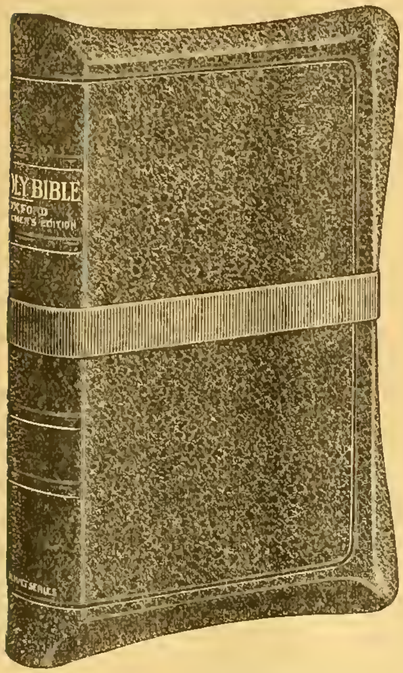

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[SPECIMEN OF MINION TYPE, 8vo BIBLE.]

Jesus appeareth to Mary ST. JOHN, XX. *and to his disciples.*

Anno DOMINI 33

m Is. 53. 9.
n ver. 31.

42 m There laid they Jesus therefore n because of the Jews' preparation *day*: for the sepulchre was nigh at hand.

CHAPTER XX.

1 *Mary cometh to the sepulchre: 3 so do Peter and John, ignorant of the resurrection. 11 Jesus appeareth to Mary Magdalene, 19 and to his disciples. 24 The incredulity, and confession of Thomas 30 The scripture is sufficient to salvation.*

16 Jesus saith unto her, Mary. She turned herself, and saith unto him, Rabboni; which is to say, Master.

17 Jesus saith unto her, Touch me not; for I am not yet ascended to my Father: but go to k my brethren, and say unto them, l I ascend unto my Father, and your Father; and *to* m my God, and your God.

18 n Mary Magdalene came and told

Anno DOMINI 33.

k Ps.22.22. Matt. 28. 10. Rom.8.29. Heb. 2. 11.
l ch. 16. 28.

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Jerusalem.
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Mosque of Omar.
Mount Carmel.
Nazareth.
Nablous or Shecem.
The Nile and Pyramids.
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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, June 9.—Very little call for honey, and the offerings also limited. Prices without change from late quotations. California extracted sells well and the stocks here are light. Weather now warm and prospects generally reported good in the surrounding States. Beeswax scarce, and 27 to 30c is bid for it. R. A. BURNETT & CO.

Kansas City, June 9.—The supply of 1897 comb and extracted honey is about all sold. Considerable inquiry for new comb. Something fancy would bring a good price.
C. C. CLEMONS & CO.

Cincinnati, June 9.—Demand is slow for all kinds of honey, especially comb. Prices for best white comb honey, 10 to 13 cents. Extracted honey brings 3½ to 6c. according to quality. Beeswax in good demand at 25 to 28c for good to choice yellow.
CHAS. F. MUTH & SON.

Boston, June 9.—Fancy white in cartons, 13c.; A No. 1 white in glass-front cases, 11 to 12c.; No. 1, 10 to 11c; No. 2, 8 to 9c. Extracted, white, 6 to 7c; light amber, 5 to 6c. Beeswax, pure, in good demand with very light supply, 30c.

At the present time the demand for both comb and extracted honey is very light with but little stock on hand.
BLAKE, SCOTT & LEE.

Cleveland, June 9.—Fancy white, 12 to 12½c.; No. 1, 11c.; No. 1 amber, 9 to 10c.; buckwheat, 8c. Extracted, white, 6c.; amber, 4 to 5c. A. B. WILLIAMS & CO.

San Francisco, June 9.—White comb, 8½ to 10c; amber, 6½ to 7½c. Extracted, white, 5½@6c.; light amber, 4¾ to 5¼c. Beeswax, 23@25c

The market is lightly stockt and in all probability will remain so throughout the season now opening, as very little honey will be produced in this State the current year. Supplies now offering are principally comb. Values for both comb and extracted are being well sustained at the prevailing rates. With no active inquiry for beeswax from any quarter, the market is easy in tone, despite the light stocks here and in the interior.

Detroit, June 9.—Fancy white honey is lower and now quoted at 11c. No. 1, 9@10c; fancy dark, 7@8c; No. 1 dark, 6@7c. Extracted, white, 5@6c; dark, 4@5c. Beeswax 27@28c.

There are no changes in quotations, and very little desirable honey left. Sales are so slow that it is difficult to quote. The poor lots are being pusht at what they will bring.
M. H. HUNT.

Minneapolis, June 9.—Honey much more encouraging. Fancy white clover comb is selling here now at 10½@11½c. Not advisable to ship darker than amber. Extracted fancy white clover, 5½@6c; amber, 5c; dark, 4@4½c.

Outlook for honey much more encouraging.
S. H. HALL & CO.

Indianapolis, June 9.—Fancy white 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand. WALTER S. POUDER.

Milwaukee, June 9.—Fancy 1-pound sections, 11@12c; A No. 1, 10@11 cents; No. 1 8@10c; amber, 8@8½c; dark, 7@7½c. White extracted in barrels and kegs, 5½@6c; amber, 5@5½c. Beeswax, 26@28c.

The demand for honey continues very good indeed, and values fairly sustained. While the best grades are most salable, the inferior grades meet attention, and the movements are quite satisfactory. A. V. BISHOP & CO.

Buffalo, June 9.—There is a very good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

St. Louis, June 10.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.
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I ARISE

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3 " Queens.	3 50
1 select tested queen	2 00
3 " " Queens	4 00
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38th Year. CHICAGO, ILL., JUNE 23, 1898. No. 25.

CONTRIBUTED ARTICLES

FACING COMB HONEY.

Opinions, Suggestions and Advice from the Commission-Men.

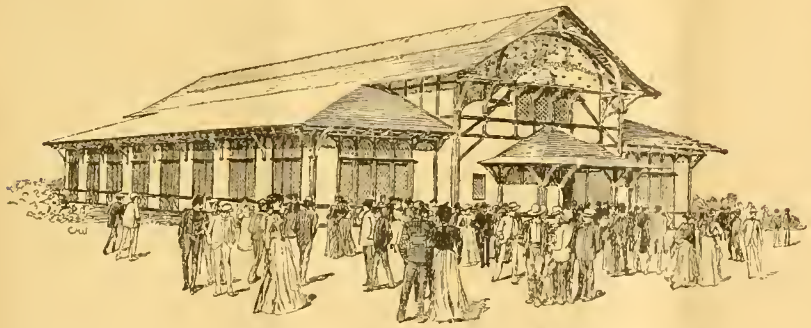
[Continued from page 373.]

[We have received the following responses to our letter on page 371, since our last week's issue.—EDITOR.]

GEORGE W. YORK & CO.—

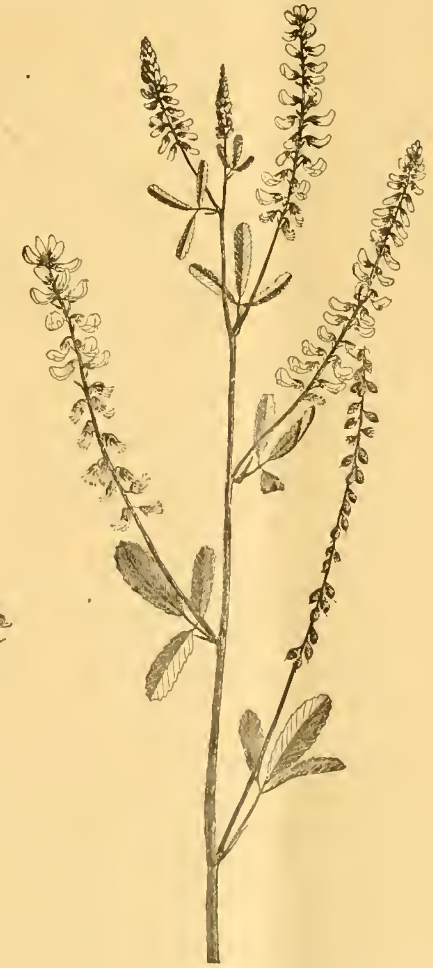
Dear Sirs :—We are in receipt of your favor requesting us to give our opinion in regard to the question of facing comb honey, lately discust in the American Bee Journal. As the paragraph referred to is certainly one of great importance to the bee-keepers in general, we cheerfully comply with your request.

As to the facing of honey, Mr. Doolittle says that he sold his crop of comb honey one year to a New York party and the buyer instructed to have the honey faced. This was a long time since—perhaps 20 years ago—and the consumers at that time were not so much acquainted with comb honey as they are to-day. It was more of a novelty those days. The party who bought Mr. Doolittle's honey that year evidently had it faced to sell it for a better grade than it really was, perhaps for fancy white, or whatever the facers indicated. We dare say this party did not give orders to have the honey faced or mixt a second year. Abraham Lincoln is quoted as saying: "You can fool some of the people all the time; you can fool all the people some of the time; but you can't fool all the people all the time." If Mr. Doolittle's buyer succeeded in disposing of the honey to advantage, and succeeded a second year, his customers must have been among the *some* people that you can fool all the time.


Apiary Building at the Trans-Mississippi Exposition.—(See page 392.)

Mr. Doolittle claims that there is nothing out of the way in facing honey if shipt on commission, every crate alike, if the producer thought it would be to his interest. Whether a bee-keeper sells his honey outright or sends it on commission, he naturally expects to realize the highest market value in either case. The quality or the grade of the honey constitutes its value. White honey is of a higher merchantable value than the dark, because it can be sold all over, while the dark honey is objected to by a majority of the people on account of its color and its strong and pungent flavor.

Again, of the white honey, the whitest commands a better price than the travel-stained and yellowed combs, because it is of nicer appearance to the eye. These facts are generally known among the bee-keepers at large, and because they *are* facts, the grading and the rules of grading comb honey have been materially improved of late years, so the producers *might* be enabled to obtain the highest market value.


Sweet Clover.—(See page 388.)

How then can it be to the interest of any bee-keeper to face or mix his honey? Would any man with common sense think for one moment that he would gain by such a practice, whether he shipt his honey on commission or sold it? To the contrary, it would be the height of folly, and we should consider such a man mentally disarranged. He might just as well face the crate with buckwheat combs and put the white honey in the center of the crate, for the result would be the same; he would only realize the price of buckwheat, or, in other words, the lowest merchantable value for all of it. Facing or irregular grading will depreciate the value of the entire shipment. This not only applies to honey but other products as well. Take California dried fruits for instance. Carloads of raisins, prunes, apricots, and peaches are rejected on account of irregular pack.

At the New York State Bee-Keepers' Convention, held in Albany in 1890, we read an article on "What Our Market Demands." It was publisht in full afterwards in the American Bee Journal and Gleanings. We called particular attention to the grading of honey, and as facing and grading are virtually the same, we desire to reproduce that part of the article, as follows:

"We would call your special attention to the grading of honey, which is as important a question as any of the former ones, and in which too much care cannot be taken. Very often we receive honey which is not properly graded, and where off grades are mixt in with the first grade and markt No. 1 white honey. The outside combs will appear all right, but inside of the crate will be hidden the poorer grades. We cannot take the trouble to open and examine every crate and comb, but have to rely on the shipper, and go by the mark and appearance of the crate. We sell and ship the honey, and the first thing we know the party to whom we shipt will write a letter complaining of the honey, and hold it subject to our order. We either have to have the honey shipt back to us, or make a liberal allowance, satisfactory to the buyer. This is certainly not very pleasant; it hurts our reputation, and we are apt to lose that customer. Not alone this, but the shipper is generally dissatisfied, too, claiming that the honey should have sold for more, and refusing to admit that the honey was improperly graded."

We also noticed Mr. A. Snyder's statement of facing. We think he was too severe. It gives us pleasure to state that, as a whole, we have had but very little fault to find of late years in the grading of honey. Bee-keepers have learned that it is to their interest to grade properly. Prominent bee-keepers, *i. e.*, large producers who have to rely on the city markets for the disposal of their product, generally are careful in grading. Yes, the vast majority of the smaller producers know how to grade, and we hope to see the day when careful grading will be universal.

Of course, when such distinguisht and able writers like Mr. Doolittle defend facing or improper grading, which, as we said before, is essentially the same, we fear that day is in the far future. While we have had no fault to find as a whole, we admit that there are exceptions, but they are mostly among the inexperienced bee-keepers or the beginners. They will crate the honey as the combs may run into their hands. Here is a case of it:

Last fall we received quite a shipment of comb honey from Pennsylvania. The different grades of white, the mixt and the dark, all mixt together in all the crates. Some of the crates were faced with fancy white, while others with dark. We attempted to sort it out, but soon gave it up. After we carried the honey for a long time we sold it all for the price of dark honey then ruling—6 to 6½ cents a pound. If this honey had been properly graded, the No. 1 white would have sold for at least 10 to 11 cents a pound, and the off grades for 8 to 9 cents a pound. Was it to the interest of *this* bee-keeper to face or mix his honey?

Strange to say, we never heard a word of complaint from this shipper, which leads us to believe that he was a beginner. We wonder if he ever read a bee-journal? Every season we receive numerous letters from new parties, asking us for information—what shape, what size section to use, whether to glass them or not, or put them in cartons, how many to put into a crate, how to ship, when to ship, and what we can realize them for the honey. While we are always willing to give all the information we can, it seems to us that if they would spend a dollar a year they could learn more in one week in a bee-journal than we could explain to them in a year.

We admit that any bee-keeper has the right to crate his honey, face or mix it just as he chooses; but in the interest of the bee-keepers themselves we earnestly hope that they will ignore the statement (we will not say advice or suggestion) of Mr. Doolittle, and instead of paying any attention to it whatever, *not* face the honey, but have every case contain the same quality as shown in the outside row.

Yours very truly,
New York. HILDRETH BROS. & SEGELKEN.

EDITOR AMERICAN BEE JOURNAL—

Dear Sir:—Your favor regarding the *facing* of honey at hand, and carefully noted. As large handlers of honey on commission we have at all times tried to impress on our regular shippers the *absolute necessity* of grading their honey HONESTLY. In this way, and this only, is it possible to secure results satisfactory to the shipper, and give the purchaser what he may desire, and what to our mind should be the aim of every producer—the building up, by careful grading, of a demand for a brand, because it is *always* what it is represented to be, and what it appears to be.

While it might not be dishonest in the strict sense of the word, to mix fancy, No. 1 and No. 2 comb honey in the same case, provided it was so understood by the purchaser at the time of the sale, yet the result would without doubt be disastrous to the shipper, for the reason that the purchaser would at once decide that a large share of the honey was second grade, and only buy at a very low price.

Then, again, such a practice would most certainly destroy confidence in brands, and as a result prices would not, and could not, be such as to equal that realized from honey sold strictly on its true grade value.

Our opinion, after many years of experience, is to grade *very carefully*, marking each case in such a way that we can keep it separate; placing your full name and brand on the fancy and No. 1 grade, but only initials, or use a different brand, on the No. 2 and dark. In this way you will be able to keep your brand A 1 in every respect, where it should be, and thus create a *demand* and *reputation* which will be your best capital in the future.

For this market we strongly advise the use of paper cartons on each comb.

If these directions are carried out, we believe better results will follow in every case. Very truly yours,
Boston. BLAKE, SCOTT & LEE.

History of the Honey-Bee; Honey, and Its Uses in Early Times.

BY F. GREINER.

It is now an undisputed fact that bees were in existence long before man. Petrified (or fossil) bees, *Apis adamitica*, have been found in numerous instances, here in a stone-quarry, there in the amber deposits, showing that bees are not a late production of nature. We have also evidence that, in prehistoric times, among people that must have been in existence then (judging from the remains of their work, tools, etc., found, honey-strainers among other things), bee-keeping was a branch of their industry. What kind of bees these people kept has, however, not been determined. The writers of later ages, and of times long past, have not made quite the distinctions between different races that we do to-day, altho Virgil, Aristotle, and others mention bees of a dark and of a light or yellow color. It seems to have been the principal aim of the ancient Germans, and, in fact, of the people in general, inhabiting North Europe, to produce honey for the purpose of converting it into a drink, evidently intoxicating. This tendency may be followed, like a red stripe in a carpet, from remote times. In the German mythology this drink, *met*, is mentioned a thousand times in the poetry of that time, altho nothing is said about bees and bee-keeping.

The German bee is common all over the northern part of Europe. It is of a dark brown, or nearly black color. This bee is not alike all over the territory named. Evolution has brought about slight changes according to existing environments, and so we find a number of different strains. First, the common brown bee, the same as we have here, the bee that was imported into America by the immigrants. In the heath sections of Germany we find the heath bee, resembling the first-named exactly in outward appearance, but differing from it in their great disposition to swarm. It may truly be called a "swarming bee." Vogel claims the heath bee, when brought into different surroundings, will acclimate itself in a few years and lose this swarming tendency.

In the mountains of Carniola we find a gray bee with a possibly slight admixture of yellow blood. It very nearly resembles our common brown bee. This Carniolan bee has been imported into America.

Going southeast we have the Caucasian bee, so named from the mountainous region, Caucasus, where it is found. It is a dark bee, possibly a cross between an eastern and western bee.

The Smyrnian bee of Asia may also be a cross with an oriental race. Greece has a dark bee; also Hungary and Austria, and in North Norway. In fact, many other lands or districts may be named, each having its own peculiar bee.

Genuine black bees may be found in Africa. Mention may be made of the Tunisian bees, or Punics. They are probably of oriental origin. In examining the bees of the different lands, we find the blacks predominating in Norway, Sweden, Denmark, France, Germany, Russia, Austria, Carniola, Switzerland, Tyrol, Greece, Northern Asia, Northern Africa, etc. All have a dark bee. Yellow bees we find only in Syria, Southern Spain, Italy, Cyprus, and other islands in the Mediterranean Sea.

F. Benton thinks that since some insects have a way to protect themselves by assuming the same color as their surroundings, it is not unreasonable to suppose that bees may have done the same. And, indeed, so it would seem. Cyprus, on account of so much yellow sand, has a very yellow appearance, and her bees are the most yellow of any. The general appearance of Africa is black. She has the darkest bees. Germany, with its mountains and forests, seems dark or brown. Her bees are brown. Carniola, with her gray rocks predominating, has the gray bee.

So much about the different bees; and now for some glimpses of bee-keeping, uses of honey, etc.

Bee-keeping in India may be traced back to the year 2,000 B. C. It was said there that it would "rain honey" in the spring of the year in certain localities. To these the shepherds would drive their cows. Having fed on the sweetened grasses their milk would be so sweet as not to need any other sweetening. A baby boy received, for his first food, honey from a golden spoon (it might bother us fellows, who have not been to the Klondike, to find the golden spoons).

Egypt was once the land of knowledge and culture (Moses received his education there, as will be remembered, 1,500 B. C.). It abounded in honey-producing plants. The date-palm, for one, carried on a single fruit stalk as many as 12,000 nectar-yielding blossoms. The information we have from this land regarding bee-keeping in those early days, is principally gleaned from the hieroglyphics on pyramids, obelisks, sphinxes, and on remains of temple walls. Honey was used to embalm the dead; wax also for the same purpose, and to make coffins air-tight. Bee-hives were made of cane, and coated with clay. Others made them wholly of clay, and burned them. Such hives are being made up to this day. The Egyptians practiced migratory bee-keeping at an early date. It is recorded in history that Solon, "the Wise," made a special trip from Greece to Egypt about 600 B. C. for the purpose of learning this art of bee-keeping.

Palestine abounded with bees at the time the Israelites first occupied it. The many cavities in the chalk rocks and trees furnisht all the needed shelter for the bees, and the people obtained all their honey and wax by simply robbing the bees. After the advent of Christ, bees were kept in hives and in apiaries. Even a smoker had come into use, in which well-dried droppings from the cattle-yard were burned. A law is recorded forbidding the lighting of the smoker on the Sabbath day (it might be well for a few of us to make a note of this).

Apiculture in Arabia seems of later origin, the people having copied from the Greeks and Romans. The first history we find in the Koran. Mohammed devotes a whole chapter in it to bees and bee-keeping. Mohammed's followers believed that honey was the principal food in "the happy land beyond."

Numerous Greek and Roman writers have given us bits of bee-history here and there. Virgil called the bees repeatedly "the children of the dead [rotten] ox." According to tradition bees might be produced at will at any time in this manner: Take a two-year-old steer [the Latin word for steer is *apis*, and so it will be seen that the word *apis* means steer as well as bee]; stuff rags or the like into his nose and mouth, no matter how much he may object, and now belabor him with a club until dead, but without breaking his skin. Now let him lie until decomposed. After a time, it was said, bees would come forth from the carcass.

It seems incredible that so absurd a story as the above could have found any believers; but this is unmistakably so; for even Melancthon, the bosom friend of Dr. Martin Luther, living 1497—1560, believed it. Yes, even later writers have recorded it as a fact. However, not all the "smart men" were as ignorant of the natural history of the bee as that. Aristotle, living between 400 and 300 years B. C., does not even mention this steer-story. His knowledge was away beyond that of other mortals of his time—yes, even of our times.

When talking with a man of high education but a year or two ago on the subject of bees, the conversation turned to the sources of honey. I mentioned that our bees "made the most of our honey from basswood."

"I had no idea the bees *could* make honey out of any kind of wood," was the educated man's reply, and he meant what he said.

Aristotle was well acquainted with the nature of the bee. He knew the true sex of the queen, the workers, the drone. He knew the queen laid all the eggs, knew the time of development of the different bees; he was wrong, however, in supposing the old bees to be the nurses, the young the field-workers. It is hard to understand that this knowledge that Aristotle possest in regard to the life of the bee did not spread more, and become the property of the people; but it is a fact that, during the following 2,000 years, more was forgotten than added, and this in the face of the fact that a great many bees were kept.

There was Julius Cæsar, 100—44 B. C. All of his farms were well stockt up with bees. Others followed his example. In the eighth century, Karl the Great, reigning over a vast empire, did a great deal to promote the keeping of bees. After the Roman Catholic church had gained a foothold in Europe, the monks, in their monasteries especially, made a business of keeping bees, and induced the people to do the same. During the eleventh century the church demanded of the people the tenth of all the honey and wax harvested of wild bees, and the third from bees kept in hives. In view of this fact, what bee-keeper of to-day has any reason for complaining of high taxes?

For illuminating purposes at these times, the wax candle was the best thing obtainable, and only the rich could afford it in a limited way. Others had to be satisfied with the light of a burning pitch-pine knot. The churches in particular consumed much wax for candles. Before Luther's time the principal church in Wittenberg used for this purpose in one year 35,000 pounds of wax. This demand for wax, and for an article to sweeten foods and drinks, stimulated the bee-business to a great extent, and the number of colonies increast. It is stated that, during the eleventh and twelfth centuries, whole shiploads of honey and wax were exported from Germany to Palestine via Constantinople. Regular honey-markets were held every year in the cities of Augsburg, Nurnberg, Frankfort and Cologne. Large breweries were built, in which quantities of honey-beer were made—enough, it is stated, to subdue large city fires. I take a few items from a honey-market report, said market being held in Nurnburg in 1250.

Comb honey was offered on earthen dishes, strained honey in pails and tubs; chunks of wax were heaped up in large piles. The honey (strained) was sold by the "seidel," and, according to a chronicle of that time, the seidel contained "14 mouthfuls and 2 fingers." Druggists were bantering for wax. Who knows, adds a later reporter, what a mixture of pulverized toad-eyes and beeswax might be good for? The city clerk needs wax for seals, and he is picking out the nicest pieces. Suddenly the business comes to a standstill, as the market-master and his crew are making the round to inspect. Honey harvested before the birthday of the Virgin Mary is not wholesome, and must not be offered for sale. The market-master receives the statement under oath that the honey is of the proper character.

The honey is also examined as to its purity. The loss of one hand was the penalty for adulteration. It seems penalties were of a severe nature. I will name another such case. Any one stealing bees or honey, and caught in the act was, without trial, delivered to the sheriff to be executed in a most terrible way. His intestines were first wound around the tree from which he took the honey, and then he was hung to the tree.

The hives in use in those times were of a very substantial nature. Let us watch one of the keepers preparing a hive. We see him standing on a ladder about 10 or 12 feet above ground, cutting a cavity from 3 to 4 feet long in a large basswood tree. Basswood or pine was preferred, and oak rejected. If a hive was needed for immediate use, the cavity was burned out with a straw fire; if not, it was just left to dry out. It was then rubbed over with wax, an entrance-hole bored in, and a suitable door fitted against the cavity and fastened. For centuries after this time the most popular hive in use was the hollowed-out log, three feet long, and a door fitted against each end. The honey from these was generally not harvested until the winter was over. The bee-keeper would then go to work and cut out all the comb he could, whether filled with honey or not, just leaving what was occupied with brood.

After the forests had been more and more cleared off in Germany, and timber became scarce, straw hives came into use, and many bees are kept in such up to this day. The majority of the modern bee-hives are made of the more porous timbers, like pine, basswood, etc., are double-walled, opening from one or two sides, cupboard fashion, not from the top, thus making it practicable to tier up colony upon colony without inconvenience (just the thing for bee-houses). Tenement hives are much liked. Of late years a few bee-keepers are commencing to construct their hives after the English and American pattern, giving access from the top, and also using pound sections.—Gleanings. Ontario Co., N. Y.

⁂

Something About Alfalfa and Sweet Clover.

BY PROF. A. J. COOK.

There are some subjects which are like Banquo's ghost, and will not "down," and the ones suggested by the above heading seem among them. It is good that they will not betake themselves away until they are rightly settled.

Regarding alfalfa, the work of the experiment stations prove conclusively that it is most valuable if cut while in bloom.

In Bulletin 48, Utah Station, will be found the following tables showing the results per acre of analysis:

FIRST CUTTING.

Date.	*Height.*	*Protein, pounds.*	*Carbo hydrates, pounds.*	*Fats, pounds.*
May 4	6½ inches.		607	40
June 1	18 inches.	697	1,247	103
July 7	Fall flower.	745	2,278	118
August 10	Flowers fallen. Leaves dry.	644	2,298	116
August 24	Still dryer.	428	1,776	94

SECOND CUTTING.

Date.	*Height.*	*Protein, pounds.*	*Carbo hydrates, pounds.*	*Fats, pounds.*
July 7	Budding.	334	657	50
July 20	Medium bloom.	519	1,140	78
August 3	Full flower.	551	1,529	81
August 24	Leaves dry.	388	1,484	81

THIRD CUTTING.

Date.	*Height.*	*Protein, pounds.*	*Carbo hydrates, pounds.*	*Fats, pounds.*
August 17		138	317	17
August 31		322	757	33
September 14		298	934	43

From the above the conclusion is apparent that alfalfa must not be cut earlier than the middle bloom, and not later than fall bloom, to secure a large yield of dry matter and albuminoids. This gives two or three weeks after budding, and several days in which the bees may gather nectar. These figures are generally accepted, and agree well with what we know of other similar plants. They may well be publisht broadcast by bee-keepers, in the hope that farmers of Utah, Colorado, Arizona, California, etc., may be influenced to delay the cutting of this valuable forage and honey-plant.

About here the hay is generally cut just as it is coming into bloom, and so, except that there are always stray plants or early ones that come into full bloom in any case, the bees get almost no honey from alfalfa. The reasons that the hay is cut so early are two, first, it is thought that the less mature hay is better for cows, tho many who think this agree that for horses it is better to wait until it is in full blossom. Most alfalfa hay here is fed to cows.

Another reason—perhaps more influential, tho rarely urged—is the greater amount secured by the early cutting. Alfalfa hay may be cut six, seven or even eight times, while three, four or five times is all that are possible if uncut until the bloom begins to fade. The one, two or three extra cuttings will give more weight, even tho at the expense of real nutrition. If we could persuade the farmer that it is to his interest to tarry in the cutting, then alfalfa would become a valuable adjunct to bee-culture all over Southern California. It will take a long time to do this, even if possible to do it at all. The grower has ready means to test the profit in his own hands, and as long as he secures more income, or thinks he does, by early cutting, just so long will the hum of the mower precede and preclude the hum of the bees.

MELILOT OR SWEET CLOVER.

I am sincerely glad that I am wrong regarding the value of sweet clover as a food for stock. It is, however, significant that Prof. A. W. Henry, in his admirable work on "Feeds and Feeding," which all interested in such subjects should own and study, makes no mention at all of this plant. The work is very complete and up-to-date.

I am glad, I say, that so many find it valuable for pasture and hay. I still fear that it will long wait general use. Red clover, east, and alfalfa, west, will, I believe, be too strong competitors. Of course, any legume is good for green-manuring, trapping as each does the wary nitrogen from the air and combining it into available food for the plant. Yet here again I fear that it will be hard to secure the sweet clover a place in general practice for such purpose. Red clover would be better in the east, while lupines and peas will give better satisfaction west.

The orchardist, in California, wishes to grow his plants for green manuring during the winter months, and plow under in late February or early March. The white sweet clover being a biennial would be of no use for bees, if treated in this way, and so if as good as other plants it would not be available for honey.

The yellow sweet clover is an annual here, but so far as I have observed is not of much excellence for honey; nor is it equal to other plants for green manuring. For plants to be of service to apiculture, they must be generally desirable so as to be grown in profusion, like white clover in the pasture-fields of the east, or basswood in the eastern forests, or white and ball sage in the brushwood or bush of California.

As a wayside plant melilotus may take rank east, and help the bee-keeper out; but for planting by the general farmer is it at all probable that it will ever find a place? It is so good a bee-plant that I *hope* it will. I *think* it will not.

Los Angeles Co., Calif.

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A Consideration of Our Bee-Keepers' Interests

BY JAMES A. STONE.

(*Read at an Illinois Farmers' Institute.*)

It matters not what pursuit we wish to enter in life, the first question that confronts us is—Will it pay?

It is an axiom that no business in *this* world will pay unless properly managed; and even then the time will come when it will not prove a success financially. We will take wheat-growing for example, which has not been profitable for a number of years, and yet in times many a farmer has paid for his farm out of the profits of wheat-growing. We might say the same of corn, hogs and cattle, and in fact all the products of the farm.

One of the great faults (we might call it) with farmers is their great disposition to rush to the same thing and overcrowd it, like a lot of frightened cattle on a boat—cause it to be sunk by *all* rushing to one side. The interests of bee-keeping are not so, for the reason that all will say the wild flowers are disappearing, and there are no honey-plants for bees to work upon as there used to be. And then there are so many who are afraid of bees. We have had many to tell us that they wanted to be let alone by the bees, they hurt too badly, and "their sting *swells* so on me," and is so painful——y! They will follow me a mile to get to sting me," and all such talk. If a person is not brave enough to stand an occasional sting, he would better never engage in bee-culture.

The writer, when a boy, was as badly affected by the sting of a bee as any one well could be. But by persistence and a determination not to give it up, he has grown to care less for their stings; and on several occasions is positive that they have cured rheumatism.

With Italian bees, a bee-veil, and a smoker, the only stings received will be on the hands, and by removing the sting immediately, and squeezing out the poison from the place affected, the pain is soon gone, and but little if any swelling occurs.

With the many barriers in the way, the interest of bee-keeping is overlookt, to the loss of everybody.

The first objection offered (that wild flowers are disappearing) can easily be overcome. No sane man ever thinks of keeping any kind of animals without in some way providing food for those animals. But when it comes to bees—because they have wings, their owner will say, "If you can't go and 'sponge' off my neighbor you can starve." To a certain extent this is all right, but suppose your neighbor has no pasture for your bees? Then comes up the original question, "Will it pay"—to raise some kind of pasturage for them? I KNOW it will pay largely. To illustrate:

The writer with his son not long since, in viewing a 20-acre piece of Alsike which they have, made this statement:

"Suppose we obtain only 50 pounds of honey per acre, at only 10 cents per pound, that would pay the rent at $5 per acre; then the hay will produce almost as much as red clover, and of a much better quality, and the seed (which is in the first crop) produces more than red clover, and also brings a higher price. And as a forage-plant we know of no plant that will attract any kind of stock away from it."

While in charge of the Illinois honey exhibit at the World's Fair, I was one day conversing with a man who proved to be a dairyman at Elgin. He said his cows on Alsike clover pasture gave more milk, and of a better quality, than did the cows of his neighbors which were on other pastures. Being suspicious that he was a bee-keeper, or that he had other interests, I began to quiz him thus:

"Perhaps you have a better strain of milkers than they?"

He answered, "They are the same cows I had previously on other pasture, and they did not produce then as now."

Then I askt, "Are you a bee-keeper?"

"No; but my neighbor's bees fairly swarm on my pasture."

That satisfied me, for altho I had raised it, I wanted to hear what others thought of it.

It has no superior as a honey-plant, unless it be sweet clover, and its quality (of honey) is as good as white clover. Its growth is like red clover, tho it has not as coarse a stem, and for that reason is a better plant to mix with timothy, as it cures as quickly as timothy. It has blossoms resembling white clover, except they have a purple tinge. Its leaf is solid green, while those of red and white clover are sprinkled with white.

In speaking of sweet clover I desire to say a word in its defense, taking the risk of incurring the ill-will of the commissioners of highways throughout the State. It has not gotten into our part of the State very extensively as yet—only here and there a patch on the highways—and everybody on first observing it, and hearing what the other fellow has to say of it, seems half frightened out of their senses, imagining they are going to be crowded out of existence by it because of its early and rapid growth.

One of our neighbors, who was thus affected, after he had been told that it was a biennial, and was very tender the first year, and did not bear seed till the second year, and then died root and branch, was seen the next spring digging up plants to take home and set in his yard.

During the World's Fair I received a very fine sample of sweet clover honey from Mr. Miller, of Lee county, 85 miles west of Chicago. I went out to buy it to add to our exhibit, and found that he had 2,300 pounds of comb, and two barrels of extracted honey from 35 colonies of bees; and all the pasture they had was the sweet clover in the adjacent highways, and 7 acres he had sown on his farm, on land that was too poor for corn; and he said that following sweet clover he had raised on this kind of land better corn than on his best land.

Why not such a plant as this be allowed to grow on the roadside instead of noxious weeds? Sweet clover is fast coming into favor as a forage plant, as it is being found out that all kinds of stock learn to like it.

At the meeting of the Northwestern Bee-Keepers' Association in Chicago, some of the bee-keepers reported that stock in the highways where they lived, kept it eaten close to the ground. Yet there are some people still living who are like the old deacon, who would not support a candidate for an office because he said he believed that the earth was round, and you couldn't make *him* believe such stuff, and he wouldn't vote for any man who did believe it!

I would not advise every farmer to be a bee-keeper, nor do I advise the planting of crops especially for honey. But as to the latter, you can draw your own conclusions from what I have said.

As to every farmer being a bee-keeper, it is not practical, for the reason that it would be in most cases on so small a scale that it would not pay him to spend much of his time with the bees, and to be successful they must have the proper care at the right time.

It is a fact that when there is no honey for the bees to gather, they do not need so much time applied to them, but the colonies will run down and be lost by becoming queenless, and from other causes that need a watchful eye occasionally, and an attentive ear to the sound of robbers, even if there is no honey being stored.

No one who is largely engaged in horticulture can afford to be very far removed from bees without more or less loss in his fruits—some seasons when bees are the only fertilizing agent to be had. The writer one year had a large crop of cherries, and got a good price for them because there were so few in the market; and I could see no reason for it unless it was the bees.

The President of the Missouri State Horticultural Society, in relating the experience with the large sweet cherry growers along the Pacific Coast, said they were growing these cherries in California, and from there they were taken north along the coast, but the trees which were thrifty and healthy would not bear any fruit in the northern locality. On investigation they discovered that the cause was a lack of fertilization. Bees were introduced into those localities, and they had no more trouble—the trees produced fine fruit in abundance.

By the mode of procedure I have partially outlined, a good apiary of 75 or 80 colonies could be had to each 3 miles square, or 9 square miles, in the State, which would in the 56,000 square miles of Illinois, give us over 6,000 apiaries of 75 colonies each—450,000 colonies, with, in ordinary years, 50 pounds of honey per colony, or 22,500,000 pounds of honey—the purest sweet that the Lord has given to man. We do not want to discourage the sugar-beet industry, but how do these figures strike you, gentlemen? While these figures may be possible, yet the highest we have ever known—reported by the assessors of the State—was in 1889, when 2,128,060 pounds were reported, at 14 cents per pound, or about $298,000. It is certainly possible to improve largely on these last figures.

Dr. C. C. Miller, of McHenry county, then President of our State association, last year received from three apiaries of 80 colonies each, over 17,000 pounds of honey; and C. P. Dadant, of Hancock county, from one of his apiaries in Brown county, of 75 colonies, obtained 8,000 pounds.

The beginner in bee-keeping must not think he can start in the business on the old plan any more than he would think of beginning to farm this spring, by going into the field with a hoe to cut corn stalks, or in the harvest time with a cradle or reap-hook to cut wheat, and his other work on the same plan, because his forefathers succeeded, and did that way. Neither must he listen to the advice of the old-timer, who will say:

"Talk about bee-keeping—why, bless your life, I have kept bees for 50 years, and I never seen a king-bee in my life. You needn't tell me that bees don't gather wax, for I have seen it on their legs. And I don't want you to talk to me about bees only living six weeks, for I have a stand of bees that my father gave me 30 years ago. And you had just as well talk to me about this earth a-goin' round the sun once in a year, as to make me believe that you can cause your bees to take one of the eggs that it would take 20 days to hatch into a worker-bee, and change it, as you say, so that in 16 days it will hatch into a queen. Nonsense!"

But what a beginner in bee-keeping should do, is to get some good book on bee-keeping and take a good bee-paper. Then with a small number of colonies of Italian bees, in a few years you will have all the bees you desire, and the knowledge needed to care for them. In fact, you will have so many that you will be ready to fall into line with bee-keepers to get a race of bees having a non-swarming disposition.

We can claim for the industry of bee-keeping what can be said of no other, viz.: It does not take from any other thing that which would make it more valuable in retaining the same, but on the contrary adds to the value of that thing.

For example, when bees go into an orchard in full bloom, to gather what nature has placed there to attract them, or some other fertilizing agent to the blossoms, they carry the fertilizing dust from blossom to blossom, causing fruit to grow where there would be none without some agent to carry the pollen (as nature seems to abhor self-fertilization), and all that the busy little bee carries off as a reward for her valuable services is not needed, and is of no use in the growth of either fruit or tree, as it was placed there by the God of nature *for them* to carry away.

The same may be said of all the other fruit or seed-bearing plants. Red clover was without seed in countries where the bumble-bee did not exist until it was introduced into those countries, for the reason that other insects could not reach the sweets secreted in the cups of the blossoms, and therefore did not visit them to carry the fertilizing dust.

It has always been said that red clover did not produce seed in the first crop, but I have observed since I have had the Italian bees that in seasons that are dry, and the blooms of red clover not so large, the Italian bees work on them sufficiently to cause a quantity of seed.

Alsike clover, as I have already said, produces seed in great abundance in the first crop, because bees work so well upon it. Can this be said of any other industry, that by taking a part from these things we have named, the remainder is made greater? And yet it is so in all cases where our bees visit our own or our neighbors' blooming orchards or fields—they give back a double value for all they take away.

A bee-keeper friend living in the northern part of our county said to me as I was viewing his alfalfa and Alsike clover fields, "I am going to get three crops from those fields. From the alfalfa [of which he had ten acres, and has for several years cut three crops] I will get three crops of hay [bees work very little on it here], and from the Alsike I will get a crop of honey—a crop of hay, and one of seed. And any one of the crops will pay the rent of the land."

In view of these facts I have shown that bee-keeping can be added to any occupation, and cause just that much more to be saved of what is otherwise going to waste, and with no loss except the time needed for their care. As an evidence of this, you need only to look at the membership of our Association, composed of ministers, lawyers, doctors, tailors, merchants, farmers and all occupations, as well as some who have retired from busy life, engaging in it for a pastime. The masses do not realize the value of honey from a hygienic standpoint, else it would have more than kept pace with sugar as an article of human consumption. Dr. Vance says: "Honey is a physiological sweet;" in other words, its constituents are such that it is absorbed into the blood without undergoing chemical change. "Such is not the fact in regard to sugar. Let me name the points of difference in ordinary sugars and syrups, and their comparative inferiority to honey as a saccharine food. Honey is an inverted sugar, consisting of levulose (fruit-sugar) and dextrose (starch-sugar), and readily absorbed into the system without being acted upon by the gastric juice, converting, as it is exprest in chemical language, inverting, it into dextrose and levulose before it is susceptible of absorption and assimilation into the blood."

Honey is not only a delicious form of sweet, but is a very healthful and nutritious form of food. It aids the natural functions of the alimentary canal. It is recommended by those who have used it as a refreshing drink, diluted with water in the proportion of from 2 to 5 per cent.

Mr. Tefft offers the following: "Sweeten your tea and coffee with extracted honey, and if you are troubled with gravel it will cure you. It is a true brain and nerve food and tonic. It improves the appetite, tones the system, and has proven to be of great value in many diseases, producing a contraction of the muscles, of the digestive organs, and as an aid to digestion it is wonderful in building up lost power. It is a cheap remedy for the consumptive, and, in fact, should take the place of sugar in many things."

In view of all the facts and possibilities herein stated, is it wise economy to let the interests of bee-keepers lag, or stand in the rear of other things not one-half as beneficial to mankind? I would answer *No*. Our bee-keepers' interests should be represented in the experimental station (for which we have sought, so far without avail), and we ought to have our pure food law enforced in this State, as we are endeavoring to have it. Sangamon Co., Ill., Feb. 18.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

A Double Quartet of Questions.

1. If a colony has foul brood, will there be any young bees hatching, and fresh-laid eggs?
2. Is there any difference between the color of the blacks and the Italians?
3. If so, have any of the black bees five bands?
4. About what time does the honey harvest come?
5. Is the Langstroth frame a self-spacer, or not?
6. Which would you prefer, if you were a beginner, the Langstroth or the Hoffman self-spacing frame?
7. About what time does the honey harvest begin, and what time does it cease?
8. Does a colony ever have worms with foul brood?

VIRGINIA.

ANSWERS.—1. Yes, the queen will keep right on laying, and some of the brood may mature, some of it dying.

2. Yes, you'll easily tell the difference when you see the Italians, which have three yellow bands.

3. No, blacks are not said to have any bands, altho they have the same rings or joints in the abdomen, but there isn't any yellow color about them.

4. The honey harvest comes at different times, owing to the source. White clover comes in May or June, buckwheat in August or September, and other plants at different times, whenever the plants are in full bloom.

5. Properly speaking, every movable frame is a Langstroth frame, altho the name is sometimes restricted to the loose-hanging frame, which is not a self-spacer.

6. If the frames are not to be handled it doesn't make any difference to the bees which they have. For the bee-keeper it doesn't make a very great deal of difference. The Hoffman is a self-spacer, and has the advantage that it will always be properly spaced, while on the other hand it gets so badly glued that one might prefer the loose frame.

7. Referring to No. 4, you will see that it depends on circumstances. White clover, which is the chief crop with me, commences somewhere about the first to the middle of June, sometimes closing very early in July, and sometimes continuing well along in August.

8. A weak colony suffers more from worms than a strong one, and as foul brood weakens a colony it invites attacks of the moth.

Using Empty Combs with Swarms.

What is the best way to use a lot of empty combs? I have a fine lot of them, too nice to melt up for wax. If a new swarm comes from a hive working in a super, and the super is put over the new swarm at once, giving the new swarm the place of the old one, will the work be continued in the super while the lower part is full of empty combs? How much different would it be from having the room below filled with foundation?

It seems that the two could be made much alike if with a sharp honey-knife the cells were cut down nearly to the base, and the bees compelled to work out the combs before they could deposit much honey. WISCONSIN.

ANSWERS.—Opinions differ somewhat as to the advisability of giving full combs to a swarm, some thinking that a mere starter is better than a full comb, but perhaps more think it an advantage to have the full combs. Some good authorities believe it best to have only foundation for the first half of the combs, adding full combs at the end of ten days or so. As to the matter of the super, the bees are likely to fill the combs in the brood-chamber first, but that may not make any difference in the long run. If at the end there is just as much honey in the brood-chamber in one case as in the other, it matters little whether it is put there first or last, so long as the same amount of surplus may be secured by the end of the season.

Yes, if you cut down the cells you will have the same as foundation. Perhaps you will do better to use the combs without cutting down.

Securing Increase—Other Questions.

One of my friends left three colonies of bees with me to be taken care of, and only asks that I return him three colonies. I have never handled bees, but I am anxious to learn, for I have an idea that if I can learn it and accomplish the work it will be a better business for me than trying to run a 200-acre farm. The work now is too hard for me, and I must try something that will not draw on my vital forces so strongly.

I purchast five Hilton chaff hives, and have them all ready for occupation—foundation and all. Now I want to work for increase as much as I can, and yet have what honey I want for family use.

1. How many colonies can I make out of the three I have, and have them strong?

2. I prefer to have the increase come by the latest approved and successful method, for when I am learning it is just as easy to learn the new way as the old. So what is the best way to obtain my increase? Please describe the process plainly. If I tier up supers for honey I get no natural swarms to speak of, so the book says. Is it a good plan to divide? And if I take a swarm, and take the frame that has the queen on, and another one with it, and put it with the bees into a new hive on the old stand, can I take the remaining six frames and divide it in two parts, and will they rear themselves a queen, or would I have to introduce a queen, or how would I manage?

3. When should dividing be done, if it is the best way?

4. When do you put on supers?

If there is any other information you can give me that will assist me I assure you it will be very thankfully received.

I may not be in as good a location for bee-keeping as I might be, but I can soon go where it is good, when I learn the management of bees. I am in the Michigan peach belt, and have 1,000 trees on my place, besides 800 apple trees. I am one mile from Lake Michigan. We grow crimson, Alsike and white clovers. My bees have free access to plenty of basswood, alfalfa, sand vetch, etc., with acres of buckwheat in the fall. MICHIGAN.

ANSWERS.—1. If the season should be extra good, you might close with 9 strong colonies, providing you made no bad moves; and if the season should be extra poor, you might not have more than three.

2. Pages of the text-books are written about the matter of increasing, and it would hardly be possible to reproduce it all in this department. Indeed, it is quite possible that you can do no better than to let the bees swarm naturally. You are mistaken in supposing that tiering up supers will prevent swarming. Unless you have very large hives you may tier up supers all you like and you'll have plenty of swarms.

The plan you mention would do, but it is hardly the best, for a weak nucleus will not rear as good a queen as a strong colony. At least during the time a young queen is fed in the larva state she should be in a strong colony. When you put the 3-frame nucleus in a new place, all the old bees will leave it and go back to the old stand, making the nucleus weak in bees, with no honey coming in for a few days, and in such a discouraged condition they will not rear the best queens. Just change your plan a little. Take the two frames with the queen and put them in a new hive on a new stand. Eight or nine days later put the old hive with the six frames on an entirely new stand. Then put the hive with the old queen back on the old place. Put an empty hive on the stand where the queen has been for the past eight days, and put in this empty hive three frames from the hive that has the six frames. Of course, you will fill up with frames of foundation. In this way your young queens will be fed in a strong colony.

3. Operate as soon as the harvest fairly commences. By waiting till this time part of your bees may swarm naturally, saving you the trouble of dividing.

4. The usual rule is to put on supers as soon as the bees put bits of white wax along the upper parts of the combs. If you divide in the way mentioned, put supers on the hives that have the old queens, at the time of making the last change.

Put in a good deal of time in studying faithfully your text-books. To be successful you should be familiar with the whole ground, and sometimes failures may come from the fact that you are not familiar with some principle that you may have thought had no practical bearing.

Be a little slow about giving up the farm till you know you can make a go with bees.

A Supposed Queenless Colony Swarming.

Do queenless colonies cast swarms? The following will be of some interest to the readers of the American Bee Journal no doubt:

On May 22 I had a colony cast a swarm at 1:30 p.m. I was at dinner at the time, and was startled to hear some one call out that the bees were swarming. This being a little unexpected, I had to get everything in readiness to take the cluster, hive them, etc., but to my surprise they never clustered, but went straight back to the hive, not having been out five minutes. Well, they simply covered that hive, and gradually went in. To make a long story short, I examined the hive carefully for a queen and for eggs and larvæ. There were a great many sealed brood-cells, and quite a number that had just been vacated by the young, and which the bees had begun to store honey in; some had been almost filled, but there was not a sign of an egg or small grub to be seen.

Now, Doctor, this is the point: If there was a queen in that colony at the time of examination, she would have laid eggs in the cells that the young bees had left, would she not? I must mention here that they had three capt queen-cells but no queen, and no sign of recently having one.

On Wednesday, May 25, this colony cast a swarm again, and returned for the second time. On examination I found that the three queen-cells were still closed—no sign of egg or larva except remaining capt brood. On Saturday, May 28, they swarmed for the third and last time up to date, and returned as before. On examination I find as before, except most of the brood hatcht, and a few large grubs here and there ready to be sealed. This colony is a very strong one (Italians), in an 8-frame Langstroth hive, with lots of honey. They came out of the cellar, having wintered well, in a strong and vigorous condition, April 8, and set to cleaning house and to work immediately.

Now the question is this: Will a colony swarm that has no queen? From my experience with this, I am of the opinion that they will, the bees being so numerous and crowded in a hive that most of them have no chance to ascertain whether they have a queen or not, as she may have been about only a week or ten days, and being in a swarming-fever, light out, expecting their queen to accompany them, and discovering her failure to do so (which would be impossible under the circumstances), return to the hive.

What is the best thing for me to do with them? TORONTO.

ANSWER.—It is hardly necessary to assume that bees with no queen will swarm, in order to account for the circumstance you relate. There may have been no laying queen in the hive for a number of days, but a young queen with defective wings may have been present. If so, the bees would act just as yours did.

Very likely there is nothing to do in the case, for by this time another queen has probably issued from one of the queen-cells and has commenced laying. If, however, you fail to find eggs in 10 or 12 days after the young queen has emerged, it may be necessary to give them a queen, a queen-cell, or a frame of young brood and eggs from which they can rear a queen.

You hardly give the bees the credit they deserve for finding out the absence of a queen. No matter how many bees are in the hive, when one bee finds out no queen is present, it doesn't take 10 minutes for the news to go through the whole hive, making a general uproar, and you may count on the matter being fully known long before the expiration of 10 days, or even two.

Is Bee Diarrhea or Dysentery a Disease?—Losing Queens.

In reply to P. A. Newcomer's request, on page 355, it is perhaps not entirely clear whether diarrhea, or dysentery, as he calls it, should be called a disease or not. It is an overloaded condition of the intestines, a flight giving relief. The confinement long-continued gives occasion for the accumulation of feces, and cold aggravates the matter, for the colder it is the more food will be eaten, causing more rapid accumulation. The character of the food makes a great difference, but those who say that food alone makes the trouble are clearly in error, unless the food be actual poison, for in cases where the food is bad and the bees suffer from diarrhea there would be no trouble if the weather was warm, or if the bees could have daily flights.

Your trouble in losing queens would probably be greatly lessened, Mr. Newcomer, if you would make just a little change in the placing of your hives. If I understand you correctly, your hives stand in rows with a space of 18 inches between each two hives. Instead of that, move No. 2 to within two inches of No. 1, No. 4 to within two inches of No. 3, and so on, moving each even number, and letting the odd numbers stand just where they are. That will make them in pairs, the two hives in each pair being two inches apart, and there being a space of 34 inches between the pairs. It will take no more room, but will practically make the hives twice as far apart, so far as relates to the queens finding their own hives.

C. C. MILLER.

Question About T Supers.

I have a T super with T tins nailed fast. The super is made of ⅜-inch sides and ⅞ ends. I never saw any of them used, but I think they are good, if one knows how. Will I have to use followers and wedges, or how will I manage it? As you use the T super, you can tell me how I can use mine for different widths of sections. WISCONSIN.

ANSWER.—It depends upon the width of the sections. Some sections will fit in the super all right without any follower and wedge, altho harder to get out. But if the sections and separators do not exactly fill the super, a follower must be used, that is, a board of proper size to shove up against the sections at one side, whatever space the follower does not occupy being taken up by a wedge, the wedge being not really in wedge form, but simply a plain stick to crowd in between the sections and the side of the super.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

EXECUTIVE COMMITTEE—Pres., George W. York; Vice-Pres., W. Z. Hutchinson; Secretary, Dr. A. B. Mason, Station B, Toledo, Ohio.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 38. JUNE 23, 1898. NO. 25.

EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Hives in Spain are made of cork-bark, and 10 colonies can be loaded on a donkey for migratory bee-keeping.

◆

For Sunburn mix a spoonful of honey in a little lukewarm water and apply this to the sunburnt skin. So says the British Bee Journal.

◆

Big Yields in Australia.—In the Australian Bee-Bulletin mention is made of 1,000 pounds of honey taken from one colony by Mr. Williamson, 1,000 by Mr. Vogel, and an average of 750 by Mr. Peterson, with 1,200 from his best colony. Australia seems to lead the world in honey resources.

◆

The Apiarian Building at the Omaha Exposition is shown on our first page this week. It is of Swiss architecture, 138x75 feet, and while it is not the largest, it is admitted to be the best arranged building on the Trans-Mississippi Exposition grounds.

The interior arrangement is of the best possible to give light from windows and sky-lights, so that at no time can a shade be cast over any exhibit in any part of the building. Five feet from the wall on either side are the honey-cases, four feet deep, and running the entire length of the main floor. These are fitted with glass on both sides, and have glass tops, with ample storage-room for empty packages underneath, which are reacht by movable panels in the bases. Three aisles running the length of the room give the visitors easy access to the exhibits of supplies, etc., located there.

On either side of the entrance are located the offices, and likewise at the exit is located the two liquefying rooms which are furnisht with gasoline stoves, boilers, etc., where exhibitors can reliquefy their honey as often as they please, or whenever necessary.

The building is plastered both inside and out, and every piece of woodwork inside is painted white. The framework overhead is decorated with white and yellow, and with "Old Glory" hanging in each festoon. This will be the home of the honey-bee and of all bee-keepers during the entire Exposition, and it is desired that all shall make themselves at home while there.

Hon. E. Whitcomb is the superintendent of the Apiary Building, and we believe he expects to be in attendance during the Exposition.

LATER.—Referring to the foregoing, Editor Abbott, in his Busy Bee, has this to say, and also expressing a hope that the next meeting of the United States Bee-Keepers' Union will be held at Omaha:

> The editor visited Omaha a few days ago, and it seems almost like a miracle the amount of work these people have done in so short a time towards completing the buildings for the great Exposition. The Apiary Building is rapidly nearing completion, and the exhibit promises to be a fine one. The management of the Trans-Mississippi have done more for the industry of bee-keeping than has ever been done before by any institution of the kind. It is safe to say that no such a building was ever before erected for the exclusive display of apiarian products as is now nearing completion at Omaha.
>
> Since I have seen the building and learned what has been done for our industry, I am thoroughly convinced that Omaha is the proper and only place to hold the next annual meeting of the United States Bee-Keepers' Union, and that it would be a serious mistake to think of locating it at any other point. We will secure more new members by locating the meeting here than it will be possible to secure in any other way. Here without a doubt will be one of the largest displays of apiarian products that was ever before put together in one building, and it will be worth a great deal to every bee-keeper who can go and see them, and at the same time join in the deliberations of the Union. On to Omaha!

◆

Foul Brood Through the Mails.—The queen-traffic may be responsible for spreading foul brood, thinks Editor Hutchinson. Not that the queen herself carries the disease, but it is carried by the retinue or the food. He thinks it may not be a useless precaution to burn cage and contents—bees and all—as suggested by Mr. Bunch on page 309 of this journal.

◆

Honey-Production of Tunis.—Among the countries which European bee-keepers have to fear in competition with their honey, Tunis in Africa is likely to take a prominent place. Nectar is abundant in certain regions, and the quality is excellent, being derived from the highly aromatic rosemary and heather. A German bee-paper reports this—Gravenhorst's Bienenzeitung.

◆

Facing Comb Honey.—In last week's number of the Bee Journal, and again this week, we give the testimony of experienced honey commission men on the subject of packing and facing comb honey. We believe that this symposium will result in great good to all concerned if the suggestions and advice shall be followed by the producers of comb honey.

We cannot understand why any one should wish to *face* their cases of honey unless it be for the purpose of deception, thus hoping that a better price may be secured than if an honest packing were followed. But buyers or consumers don't care to be "caught" the second time, so ever after once being "bitten" they will think it necessary to be on the watch for faced honey when buying.

It is hardly necessary for us to repeat that we are wholly against facing cases of honey. Every honest man should be. There is altogether too much deception in the world, and just because people have been brought up to expect to be defrauded is no excuse for any one practicing a dishonest thing.

We are pleased to see the unanimity with which the honey-dealers of the various cities have responded to our request, and the general agreement existing among them along the lines of packing and grading comb honey. They know that what is good for the bee-keeper is also good for themselves, hence their advice to so grade and put up comb honey for market that a reputation for honest packing and good quality may be establisht.

We trust that our readers may profit by the discussion of the questionable practice of "facing comb honey."

THE WEEKLY BUDGET

Dr. A. B. Mason, of Lucas Co., Ohio, writing us June 13, said: "White clover is in full bloom, but bees are getting very little surplus."

Mr. M. Woodard, of Mecosta Co., Mich., wrote us June 14:

"Bees are doing fine at present. Prospects are good. The 'Old Reliable' is 'out of sight.'"

Mr. O. L. Perdew, of Marshall Co., Ill., wrote us June 10:

"I like the American Bee Journal very much, and would not be without it for ten times its cost."

Messrs. Van Allen & Williams, of Crawford Co., Wis., writing us June 14, reported their bees doing remarkably well at that time. They are the manufacturers of the Williams' Automatic Honey Extractor, and also dealers in queen-bees. See their advertisement in another column.

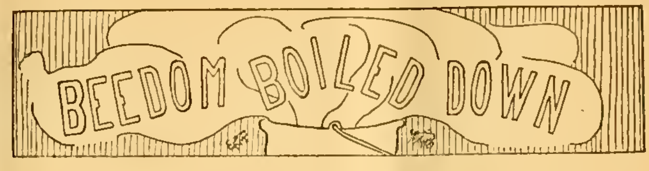
Mr. Wm. P. Collins, of Lincoln Co., Nebr., called on us last Friday, June 17. He is a railroad man, but finds time to do quite a good deal with bees. He says they have a great country out there for bees, with simply miles of alfalfa and sweet clover. Mr. Collins has traveled quite extensively in this country, but seems to think "there's no place like home."

Dr. C. C. Miller, of McHenry Co., Ill., wrote us as follows last week:

"More than three weeks ago the first clover blossom appeared, but there's less honey in the hives now than at that time. For days it has been rainy and cloudy, sometimes hot, but always wet and cloudy. Yesterday was the first day for some time that was clear, and the bees improved it by busily driving out the drones. To-day (June 15) it is cold enough for winter clothing. White clover bloom is fairly plenty, but it's a question whether there's honey in it. The market price of granulated sugar begins to interest me."

Mr. Thos. Wm. Cowan, a few days before sailing from New York for England, June 11, dropt us a few lines, expressing their appreciation and enjoyment of the afternoon drive Mr. Kreutzinger and the writer gave them (Mr. and Mrs. Cowan) *May 26*, when they were in Chicago. (By the way, that date was wrongly printed "May 2" on page 360.) Mr. Cowan also wrote that they had a pleasant visit with Dr. Mason, at Toledo, and with the Roots, and regretted not being able to prolong their stay so as to take in Mr. Hutchinson as well. We shall always remember with much pleasure meeting Mr. and Mrs. Cowan.

The Names and Addresses of all your bee-friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums we are offering. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.



Honey for Cooking.—Cynthia E. Tayne thinks honey is better than sugar for canning fruit, and especially in black-raspberry pies. For apple-pies and for cake she uses part honey.—Gleanings.

Pollen in Winter is consumed by bees, as shown by the investigations of Dr. Ciesielski, who found pollen-hulls in winter feces; but he agrees with the general view that they may be wintered without pollen.

To Increase Brood-Rearing, it is said many bee-keepers slide under the combs a slice of black bread soakt in honey, the bees not only taking the honey but bread as well, being thereby stimulated to greater energy in brood-rearing.—Centralblatt.

Immunity from Snake-Poison.—Th. Weippl, editor of Bienen-Vater, quotes from an Austrian paper, without vouching for its truth, the statement that a French chemist inoculated dogs with poison extracted from bees, and the dogs were then unharmed by the bite of deadly snakes.

Early Taking Out.—C. W. Post took out the first 66 colonies Feb. 11, leaving the balance in the cellar till March 5 to 12. He thinks if there was any difference it was in favor of those first taken out. They were packt after being taken out of the cellar, and for top packing he likes another colony.—Canadian Bee Journal.

Bearing the Market.—The sleepy writer that hails from Naptown, in Progressive Bee-Keeper, enters a very wide-awake protest against the custom of bringing down prices by making big reports in advance as to the crop. Some large dealers send out letters of inquiry in advance, and bee-keepers report great expectations, thus pulling down prices.

Preparation for Winter.—"Some of our forehanded bee-keepers begin preparations this month for the coming winter by securing extra combs of sealed honey for winter stores."—Editorial in American Bee-Keeper. Nothing particularly original in that, Mr. Hill, but all the same it is one of those things that needs to be thrust in the faces of many a veteran as well as novice.

Objections to Separators.—"Not only are sections less plump in appearance when built with separators," says Adrian Getaz, in Review, "but they are in some cases a hindrance to the bees, as when the temperature is so low in the supers that the bees must cluster in large bunches to produce the wax. He thinks it possible that the fence separator may not be thus objectionable."

Contraction.—Editor Hutchinson is very emphatic that contraction of the brood-nest is never practiced with an establisht colony, only at time of hiving a swarm. At such time to give full room in the brood-chamber would retard work in the super, hence the custom of giving a swarm only part of its complement of frames at hiving. He objects to Editor Root's calling contraction a fad.

Laying Workers Using Worker-Cells.—M. Devauchelle having said that laying workers deposit eggs only in drone-cells, Dr. C. C. Miller replies, in l'Apiculteur, that such is the fact when drone-cells are present, but in the absence of drone-cells they use worker-cells, in that case laying one egg in a cell regularly, so that the work cannot be distinguisht from that of a fertile queen until the brood is sealed.

The Bee-Master Roof—A roof for bee hives is given in The Bee-Master, that the editor warrants rain-proof, although it may be full of cracks of any size up to one-fourth inch. Make a roof sloping from the top both ways at an angle of 45 degrees, letting the boards run up and down, and making sure that the eaves project over the hive. The editor says the rain will run down the cracks, but will not drop into the hive.

Specific Gravity of Honey seems a rather unsettled problem. Delos Wood, of California, in Gleanings, says he has never sold a can of extracted honey that didn't weigh 12 pounds or more to the gallon. He thinks the ones who sell unripened honey are those who wait till it is sealed. When sealed it ripens very slowly, and when honey is coming with a rush the bees will not wait till it is thoroughly ripened before sealing. Editor Root thinks conditions in California may be different from those of the east.

Systematic Pilfering.—The editor of the Canadian Bee Journal complains that the practice of appropriating good ideas without giving proper credit is getting quite too common. As a good deal has been said about publishing names of dishonest honey-dealers, why not publish names of dishonest editors as well? But by all means, Mr. Holtermann, be sure you first follow the instruction given by the Great Teacher, in Matthew XVIII, 18.

The Schenk Theory of Controlling Sex by the nutriment given the mother before conception, which has stirred up some little dust among bee-keepers, has been characterized by scientific men at its true worth, to use Haeckel's words, as "Much ado obout nothing." The secret of the whole thing lies in one word—business. In one week 150,000 copies of the book containing Schenk's theory have been sold at 75 cents each.—Bienen-Vater.

Poisoned Honey.—A writer in Australian Bee-Bulletin says: "The public need not fear eating honey on the score that it may contain Paris green as an ingredient, because the Paris green will poison the bees before they can bring it home to have it stored in the cell....In brief, no danger from poisoned honey is possible, because what will poison a human being will effectually poison a bee, and prevent it from storing the honey containing the poison."

Burn Foul-Broody Combs.—Not only should they be burnt, but burnt in such way that no remains can be workt upon by the bees. N. E. France reports, in Review, that he has seen a large pile of refuse from a solar extractor where diseased combs were melted, and bees were working freely on the pile; and he had seen cases of disease that had come from the same. His plan is to build a fire in a hole on level ground, burn all diseased material on the coals, then fill up the hole.

Why is Honey so Low in Price? is a question discust in the American Bee-Keeper, by G. M. Doolittle and Ed. Jolley, a picture of the latter on page 101 making it seem that said Jolley might with entire propriety leave the "e" out of his name. As nearly as can be made out by everyday bee-keepers, Mr. Doolittle ascribes low prices to trusts and the accumulation of capital in the hands of the few, while he of the jovial name thinks bee-keepers are to blame for lack of co-operation.

Equalizing Colonies.—L. Wolff says he has experienced no loss of queens by making a weak colony exchange places with a strong one, provided he made the exchange at the beginning of a honey-flow and in the middle of the day when most bees were in flight. Another means he has employed to equalize colonies is to put a feed dish under a strong colony, and when well covered with bees take it to a weak colony, repeating as often as necessary. But with movable combs the object is more easily accomplisht by giving combs of sealed brood.—Centralblatt.

Suspicious of Too Clean Sections.—W. H. Ritter reports in the Progressive Bee-Keeper that he sells sections better without cleaning. On his market the beautifully cleaned sections are lookt upon with suspicion. All artificial! Made at a factory at St. Louis. He says, "When I begin to open up a case of my honey at the hotel or on a groceryman's counter, taking out a row of sections, then a division-board, all stuck up with bee-glue, then you will hear the bystanders talk: 'O, there's the sure-enough honey. No bogus honey about that.'" So he isn't interested in section-cleaners.

Two Stray Straws from Gleanings.—When trying to explain how a queen can see to lay in the right place on the opposite side of the comb, why not decide that she simply takes the warmest spot for her laying? [There may be something in this.—Ed.]

A screwdriver is too thick and blunt to take off supers. I had one ground sharp, the bevel running back more than an inch, and it is tip-top But I'm ready for a better general tool. [Such a screwdriver would be far better than one with the regulation point, I am very sure.—Ed.]

FOR THE READERS OF THE AMERICAN BEE JOURNAL.

PROFITABLE BEE-KEEPING,

—WITH—

HINTS TO BEGINNERS.......

By Mr. C. N. White, of England,

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

Mr. White is owner of one of the largest apiaries in the country where he lives, and has made a life study of the subject. He is also lecturer, under the Technical Education Scheme, to several County Councils in England. He will treat the subject in a

Series of Nine Illustrated Articles:

1. General and Introductory.
2. Bees.
3. Handling Bees.
4. Swarming.
5. Hives.
6. Foundation.
7. Supering.
8. Diseases.
9. Wintering

This will be a series of practical articles that bee-keepers of the United States will not want to miss reading. They are copyrighted by Mr. White, and will appear only in the AMERICAN BEE JOURNAL, beginning in July.

We want our present readers to begin at once to get their neighbor bee-keepers to subscribe for the Bee Journal for the last six months of 1898, and thus read the articles by Mr. White. In order that all may be able to take advantage of this rare opportunity to learn from a successful and practical English authority on bee-keeping, we will send the American Bee Journal for

The balance of 1898 for only 40 cents—
To a NEW Subscriber—thus making it

SIX MONTHS FOR ONLY FORTY CENTS—

Which can be sent in stamps or silver. If you are a subscriber already, show the offer to your bee-keeping neighbors, or get their subscriptions, and we will give YOU, for your trouble, your choice of ONE of the following list, for each NEW 40-cent subscriber you send:

For Sending ONE New 40-cent Subscriber:

1 Wood Binder for a Year's Bee Journals
2 Queen-Clipping Device
3 Handbook of Health—Dr. Foote
4 Poultry for Market—Fan. Field
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6 Our Poultry Doctor—Fan. Field
7 Capons and Caponizing—Field
8 Kendall's Horse-Book
9 Mullen's Horse-Book
10 Foul Brood—by Dr. Howard
11 Silo and Silage—by Prof. Cook
12 Foul Brood Treatment—by Prof. Cheshire
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8 Dr. Brown's "Bee-Keeping for Beginners"
9 Bienen-Kultur—German
10 Bees and Honey—160 pages—by Newman
11 People's Atlas of the World

Please remember that all the above premiums are offered **only** to those who are now subscribers, and who will send in new ones. A new subscriber at 40 cents cannot also claim a premium; but we will begin the subscription just as soon as it is sent in, which will secure several June numbers in addition to the last 6 months of this year, provided the subscription is forwarded to us **at once.**

If you want your bee-keeping neighbors to be CERTAIN of getting ALL the numbers of the last 6 months of 1898, you had better get their subscriptions in **before July 1,** as we may run out of copies before the end of that month.

Now, let every one go to work, and help roll up the largest list of subscribers the old American Bee Journal ever had. It can easily be done if ALL who possibly can get a few new subscribers will kindly do so.

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“A Queenly Deceiver.”

“He fools his customers by sending more than is expected.”—See page 105, current volume Bee Journal, and ask for the free pamphlet referred to. I am now prepared to fill orders promptly with **FINE YELLOW-TO-THE-TIP QUEENS**, or daughters of imported stock mated to golden drones, at 75c each. Purely-mated Queens reared from the best stock and by the best method known, is what I furnish, and will prove it to all who give me a chance. Money Order Office, Warrenton.

Address, **W. H. PRIDGEN.**
22Atf Creek, Warren County, N. C.
Please mention Bee Journal when writing.

Bees for Sale in Indiana !

Italian Bees in 8-frame Langstroth hives. Per colony $5.00; 5 or more at one time $4.50 per colony. I have only a limited number for sale. They are strong colonies, and ready for business. Address, **W. H. WATTS,**
19Atf **Ross, Lake Co., Ind.**

Excelsior Incubator and Brooder Cheap .....

200 eggs capacity. Good as new. Used for only two hatches. Everything complete. Will sell it for **TWENTY DOLLARS,** half the cost price
Address, **P. W. DUNNE,**
River Forest, Cook Co., Ill.

Texas Queens

Best honey-gathering strain in America. Tested, $1.50. Untested, $1.00. Write for a Circular. **J. D. GIVENS, Lisbon, Tex.**
7A26t Please mention the Bee Journal.

BEE-KEEPERS' SUPPLIES ! Largest and Best equipt Factory in the **SOUTH-WEST.**
Send for Catalog.
FRED A. DALTON,
1A26t WALKER, Vernon Co., Mo.

Queens, Bees and Bee-Keepers' Supplies

Tested Queens in April and May, $1.00. Untested, 75c. Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

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Bee-Supplies! ROOT'S GOODS at Root's Prices.
Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Cat. free. **Walter S. Pouder,**
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QUEENS Italian stock. Untested, 70c each; 3 for $2.00. After July 1, 50 cents each; tested, $1.00 each. **Root's Goods at Root's Prices.** Prompt shipment and satisfaction guaranteed. Catalog free.
THEODORE BENDER,
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THE PLACE
TO GET YOUR
QUEENS
Is of H. G. QUIRIN, of Bellevue, Ohio.
Ten years' experience with the best of methods and breeders enables him to furnish the best of Queens—Golden Italian—Doolittle's strain—warranted purely mated, 75c each; 6 for $4. After June, 50c; 6 for $2.75. Leather Colored same price. Safe arrival. Will run 1,200 Nuclei, so there will be no waiting for your Queens. 23A16t
Please mention Bee Journal when writing.

GENERAL ITEMS

Bees Doing Well.

Bees are doing splendidly in this section. There are indications of a great honey crop this year. All we want is for the weather to continue favorable. White clover is very abundant. They say there has not been anything like it for years—it is simply clover everywhere. Sweet clover also is of great promise. I will write later. H. A. SMALL.
Ontario, Canada, June 9.

Bees Help the Peach Crop.

Our bees have not as much honey as they had a month ago. It is so showery. The flow here from fruit-bloom was very light. I have had only one swarm to date. Our peach-trees are very full of fruit, while those of our neighbors have but few, owing, no doubt, in part, to the close proximity of the bees.

MRS. L. HARRISON.
Peoria Co., Ill., June 11.

Wet Weather—Loss by Old Queens.

I am very much pleased with the Bee Journal; it has been of practical value to me, and that is what counts. My winter and spring loss in bees this year has been the heaviest since I have been keeping bees—six years—nearly 40 per cent. Old queens were mostly the cause. What bees I have left are all strong, and doing as well as the wet spring weather will let them. F. E. HENRY.
Harrison Co., Iowa, June 11.

Utah's Foul Brood Law.

On page 332, Mr. Volkert, of Virginia, after offering a few comments on the above law, asks if I would tell why Utah's bee-keepers can't guard themselves as well as an inspector.

In the first place I would ask Mr. V. how the bee-keepers of any State could interfere with the bees of any person, no matter how desperate the case, or how much his own bees might need protection? What could be done without some law for their protection and guidance? If all bee-keepers were educated or informed in regard to this matter there would be no trouble, but unfortunately they are not, and to think that they will be is too much to expect in the near future. We know of too many instances where bee-keepers, or rather bee-owners, having bees in box-hives, that became diseased and spread the same throughout the neighborhood, causing much trouble and loss; hence the necessity, at least as far as Utah's bee-keepers are concerned, of having a law that will protect the bee-industry.

I called on a bee-keeper having a large apiary, who came from a State less than a thousand miles from where Mr. V. lives, and altho he is a bee-keeper of 40 years' experience, I found him actually dividing foul-broody colonies. The result was that I received the thanks of the bee-keeper in question, and others in the neighborhood.

As the Utah law requires that all the inspectors shall be nominated or petitioned for by the bee-keepers themselves, there is not much danger of an

Sweet Clover
And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Sweet Clover (white).	.60	$1.00	$2.25	$4.00
Alsike Clover.........	.70	1.25	3.00	5.75
White Clover...	.80	1.40	3.00	5.00
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Add 25 cents to your order, for cartage, if wanted by freight.
Your orders are solicited.

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Young Tested Italian Queens For 75c each.....
I have a fine lot of them, and can fill orders **promptly.** Address,
F. F. MORROW, Wallaceburg, Ark.
24Atf Please mention the Bee Journal.

Muth's HONEY-EXTRACTOR Square Glass Jars.
Root's Goods at Root's Prices.
BEE-KEEPERS' SUPPLIES in general, etc etc,
Send for our new catalog.
Practical Hints” will be mailed for 10c. in stamps. Apply to—
Chas. F. Muth & Son, Cincinnati, Ohio.
Please mention Bee Journal when writing.

ITALIAN QUEENS bred for honey-gathering by the best methods, with no black bees in my apiary; mismated Queens are rare. Untested, 50c each; $5 doz. After July 1, 45c, or $4.50 doz. Tested, 75c each or 3 for $2. Send for circular. Safe arrival.
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Golden Italian Queens Cheap !
Two-frame Nucleus, with Queen, $2.25.
If you want **BEES FOR BUSINESS,** send for my Catalog of prices. . . . .
18Etf **J. F. MICHAEL, Greenville, Ohio.**
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For Meeting Baptist Young People's Union,

At Buffalo, N.Y., July 14–17, the Nickel Plate Road will sell tickets at rates lower than via other lines. The accommodations are strictly first-class in every particular, and it will be to your advantage to communicate with the General Agent, 111 Adams Street, Chicago, before purchasing your ticket. Telephone Main 3389. (28)

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the BEE JOURNAL. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

New Train Service to Buffalo

Nickel Plate Road train No. 6, from the Van Buren Street Passenger Station, Chicago (on the Loop,) 2:55 p.m., daily, with Buffalo sleeper, arriving in that city at 7:40 the following morning. Through New York sleeper on the same train, via Lackawanna Road, Buffalo to New York, arriving early next evening. Three through trains daily, at convenient hours, to Fort Wayne, Cleveland, Erie, Buffalo, New York and Boston. Rates lower than via other lines. City ticket office, 111 Adams St., and Auditorium Annex. Tel. Main 3389. (33—24-2)

DR. PEIRO,

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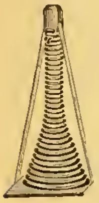

Queen-Clipping Device Free

The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 30 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

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Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

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OUR PRICES are worth looking at. We are making the new

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with dovetailed body and supers, and a full line of other Supplies, and we are selling them CHEAP. A postal sent for a price-list may save you $$$$

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That covers the whole Apicultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

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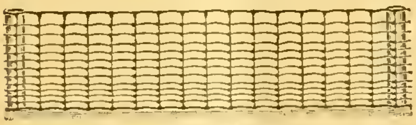

Soldierly Heroism

knows only prompt obedience to superiors. **Having no superior, THE PAGE** must be a "law unto itself,"—a "self regulator."

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

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The Very Best Queens at the Lowest Prices....

Beautiful Golden Italian Queens bred from the best honey-gathering strain, reared by the best known methods—50 cents each. Select Tested, $1.00. **No black bees here.**

W. G. GATHRIGHT,
25A3t DONA ANA, NEW MEX.

Please mention Bee Journal when writing.

incompetent inspector being appointed. And while the law reads that the inspector shall visit all colonies of bees at least once a year, it is interpreted to mean that he shall visit all apiaries in his county or district, and wherever he may find any foul brood or kindred disease, he must eradicate it for the benefit of the bee-keeper, and for the general good of the industry.

Whether this is satisfactory to Mr. Volkert or not, I fail to see anything so very monstrous in our law, which is intended to encourage and protect the industry in this State, and, as far as my experience is concerned, it is doing so.

Salt Lake Co, Utah. E. S. LOVESY.

Too Wet Weather.

Bees are in good condition for the clovers, which are in bloom now. White clover is plentiful and very rank, but the weather is too cloudy and wet for yielding honey very much. Prospects are favorable if the weather will be good from now on. About one-half of the linden trees are loaded with buds, and will commence to bloom in about two weeks, or before. They are fully two weeks earlier than usual. All kinds of crops look promising for a big harvest. Some fields are getting too rank, and will fall down if this profusely-growing weather keeps on much longer. My bees commenced swarming June 8.

C. THEILMANN.

Wabasha Co., Minn., June 10.

Poor Season Expected.

Bees are doing very poorly here this year. I expect a very poor season, as the conditions seem to be against the bees. GEO. M. STINEBRING.

Wayne Co., Ohio, June 15.

Miles Has No Smiles.

MR. EDITOR:—Please say to your readers that old Iowa is wet, wetter wettest; and while clover and basswood look extra nice, we are afraid if it doesn't stop raining soon it will be a Water—loo. The ground is white with clover bloom, yet the bees have killed their drones and thrown out drone-brood. Will it pay to feed? Brethren, what say you?

E. S. MILES.

Crawford Co., Iowa, June 11.

Feeding Sealed Honey.

I have kept bees for over 30 years, and for the past 25 years I have taken every tenth hive for a bank of deposit for the rest. My object has been to feed only sealed comb honey. If a colony needs honey it is better to feed it in this way than in liquid form, as in the latter method it stimulates brood-rearing, therefore requiring more feed. It is better to contract the hive of a weak colony by dummies or sealed frames of honey, and thus prevent brood-rearing beyond the ability of the colony to provide for itself.

I have been induced to write the above on account of the practice of most of the bee-keepers here in California, especially in this dry year when there is no honey in sight, and most of the bee-keepers will have to feed their bees to save them.

It is the practice here by most of the extracted honey men, to leave their extracting-combs on the hive throughout the year. When this is done the queen has unlimited room to rear bees, to eat

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PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

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Sole Manufacturer,
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BEE-KEEPERS! Let me send you my 64-page Catalog for 1898

J. M. Jenkins, Wetumpka, Ala.

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For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 25 cents per pound, CASH. No commission. Now if you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

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118 Michigan st., CHICAGO, ILL.

First Excursion of the Season to Buffalo

Via Nickel Plate Road, July 14-17, at one fare for the round trip. Choice of water or rail between Cleveland and Buffalo within final limit of ticket. For further information call on or address J. Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone Main 3389. (31)

Bee-Keepers' Photograph.—We have now on hand a limited number of excellent photographs of prominent bee-keepers—a number of pictures on one card. The likeness of 49 of them are shown on one of the photographs, and 121 on the other. We will send them, postpaid, for 30 cts. a card, mailing from the 121 kind first; then after they are all gone, we will send the 49 kind. So those who order first will get the most "faces" for their money. Send orders to the Bee Journal office.

New Sleeping-Car Line

Between Chicago and Buffalo on train No. 6, Nickel Plate Road, leaving Chicago daily from the Van Buren Street Passenger Station (on the Loop) at 2:55 p. m. Also a through sleeper to New York via Nickel Plate and Lackawanna Roads, in addition to the excellent through service heretofore maintained. (35—24-2)

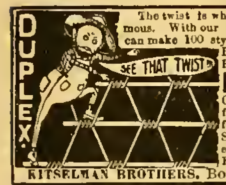
Be It Known

To all Men, we are prepared to fill orders promptly for

CHOICE QUEENS of the best strains of **Golden or Leather-Colored Italians....**

Tested $1 00: Untested—one, 75c; three, $1.50. After July 1, 50c each. Remit by Express Money Order, payable at Barnum, Wis. One and two-cent stamps taken. Address,

Van Allen & Williams,
25Atf **BARNUM, WIS.**
Please mention Bee Journal when writing.



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KITSELMAN BROTHERS, Box 138, Ridgeville, Indiana.

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Two Special Offers.

As explained in former ads., publishers can afford to put forth extra efforts in securing *new* subscribers; as the majority remain, once they become subscribers to a *good* journal. It is from this point of view that I make the following offers:

Offer No. 1.

To any one not a subscriber to the Review who will send me $3.00, I will send the Review one year and 1,000 strictly firstclass, snow-white one-piece Sections. After accepting this offer if any one wishes to buy more sections, I will furnish them at the following prices: 1,000, $2.75; 2,000 for $5.25; 3,000 for $7.50; 5,000 for $12 00. Sections will be shipt from any of the following points: Flint, Mich.; Chicago, Ill.; Medina, O.; Jamestown, N.Y.; Higginsville, Mo., or Omaha, Neb.

Offer No. 2.

To any one not a subscriber to the Review who will send me $1.50, I will send the Review one year and a fine, TESTED Italian Queen. Purchasers may have either the bright, golden strain, or the dark leather-colored reared from imported mothers. After accepting this offer, if any one wishes more queens, they will be furnisht at the following prices: Single queen, 90 cts.; 3 for $2.65; 6 for $5.00; 12 or more at 75c each. Orders will be filled in rotation, and safe arrival guaranteed.

If you are not acquainted with the Review, and wish to see it before subscribing, send 10 cents for three late but different issues, and the 10 cents may apply on any subscription sent in during 1898. W. Z. HUTCHINSON,
FLINT, MICH.

By Return Mail.
Queens.
Strictly 5-band or Golden Beauties. Untested, 50 cents. Tested, $1.00.
25A8t TERRAL BROS., Lampasas, Texas.

One Fare for the Round Trip

To Buffalo, N. Y., and return, account Baptist Young People's Union meeting, July 14-17. Rates lower than via other lines. For full information call on or address J. Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone 3389 Main. (30

up the feed that is given them, and liquid feed only makes the matter worse. What is the use of rearing bees to eat what you have given them? The smaller a colony of bees can be kept the better, in a dry season like this, providing they can sustain life until a honey season comes. It has not been as dry here for 25 years, old settlers say.

CYRUS C. ALDRICH.
Riverside Co., Calif., June 8.

Unfavorable Season.

I have 18 colonies of Italians, but the season is very unfavorable.

H. RISHER.
Ouachita Co., La., June 13.

Artificial Queen-Cells by Kersten.

I always believed that Doolittle was the inventor and first maker of artificial queen-cells, but the Nordl. Bztg. declares that a blacksmith by the name of Kersten, in Biegen, Brandenburg, Germany, was the first. He exhibited his cells 26 years ago in Halle. But little notice was given him.

H. ROHRS.
Rock Co., Wis.

Outlook Not Encouraging.

It looks as if we were not going to get any honey harvest. The bees are only making a living now, and I had to feed during May, some little, to keep starvation down. It is too wet and cool. The small red clover did not bloom, and my Alsike is not hurting itself in blooming, and the bees didn't visit it very strong. The only thing we can depend upon now is the second crop of small red clover and the first blooming of sapling or peavine clover. I have 30 acres for my bees to visit, with blue thistle along the Potomac river and the mountain. About 100 to 125 acres of Alsike was sowed by neighbor farmers. I got the leaflets on Alsike, and gave them out to the neighbors last summer at picnics, and my brother, S. J. Hammond, raised about 17 bushels of seed and sold it to our neighbors.

I am not discouraged in the least, as I was so lucky as to hold my wheat crop of 1897—over 1,100 bushels—and got $1.25 per bushel; and sold my last year's crop of honey in Washington, D. C., for 15 cents a section. It netted me almost fourteen cents.

L. A. HAMMOND.
Washington Co., Md., June 7.

Young Queens Swarming—Carniolans

Page 346, June 2, says: "But when a young queen is reared in a colony, he (Gravenhorst) has never known such young queen to swarm that year." I have just had such instance. May 19 I divided a colony, making three. I put one of the new ones in the old stand, and removed the old queen and colony some distance. The one on the old stand became very strong through desertions from the other two hives, and June 4 swarmed, thus making a third colony from one old colony, each of the three new colonies now having queens just reared.

Perhaps Dr. Miller can tell me why the new queens are dark when the mother is very yellow (leather-colored), and rears yellow bees.

Apropos of Carniolans (page 342), my experience so far is not satisfactory. I have one colony that has not workt a

A Book Recommended by Dr. Gallup.

THE NEW METHOD

In Health and Disease.

By W. E Forest, M. D., 12th Edition, Revised, Illustrated, and Enlarged. This is the greatest and best work ever publisht as a HOME PHYSICIAN, and as

A Guide to Health.

It makes the way from **Weakness** to **Strength** so plain that only those who are past recovery (the very few) need to be sick, and the well who will follow its teachings **cannot be sick.** It is now in many families the only counsellor in matters of health, saving the need of calling a physician and all expenses for medicines, as it teaches Hygiene and the use of Nature's remedies, **not a drug treatment.**

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are considered, and there is not a curable disease that has not been helpt by some of the "*New Methods*" given here; even those who have been pronounced **Consumptive** have been entirely cured. While for **Rheumatism, Indigestion, Dyspepsia, Constipation, Dysentary, Liver and Kidney Troubles, Catarrh, Emaciation, General Debility, Nervous Exhaustion, Diseases Peculiar to Women,** etc., the methods are sure, and can be carried out at one's own home and with little or no expense.

A Guarantee.

So confident are the publishers of the results, that they offer to refund the money to any one who will try "New Methods" thoroughly, if the book is returned in good condition.

The New Edition

is illustrated with a number of Anatomical plates from the best English work on Anatomy publisht, and others made expressly for this work; contains 300 pages, printed on fine calendered paper, and although the price of the first edition (much smaller in size and without illustrations) was $2.50, we sell this at $1.00, postpaid.

PREMIUM OFFERS.

For sending us two new subscribers to the Bee Journal for one year, we will mail you the book free as a premium, or we will mail it for sending your own advance renewal and one new yearly subscriber. This is a wonderful premium offer. Address all orders to—

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ITALIAN
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CARNIOLAN QUEENS,

Three or five-banded—Untested, 50c; Tested, 75c. Warranted purely mated. Safe arrival guaranteed. Postoffice Money Orders made payable at Caldwell. Address,

C. B. BANKSTON,
24Atf **Chriesman, Texas.**
Please mention Bee Journal when writing.

lick in the supers—has not even drawn out several sheets of foundation given them, but has reared drones and queens galore, and had almost swarmed itself to death till I got in and cut out about 15 queen-cells. The swarms cluster in the hive for a week or more before breaking and going to work.

Geo. H. Stipp.
Santa Clara Co., Calif.

* * *

Killed Off Drones—Italianizing.

We have had too much rain for the bees in this locality. Some had a few swarms in May, but most of the colonies have killed their drones, which we think says "honey is scarce." But if we get some fair weather soon, we may get some surplus from white clover. If that should get washt out as much as the fruit-bloom did, the bees will have to hustle to live. But what is our loss may be somebody else's gain, by way of a better price.

I am a beginner in the late style of handling bees, but was reared with bees in the old log and box-hive style, but by the help I could gather from the American Bee Journal and its contributors, I have learned to rear some queens, and have been successful in introducing the most of them. I had an imported Italian queen and am rearing my own from her for my little apiary. I think I can soon raise up my stock to a better grade.

A. A. Houser.
McDonough Co., Ill., June 13.

* * *

Bees Barely Making a Living.

White clover has been in full bloom for the two past weeks, and yet bees were barely making a living.

Wm. Russell.
Hennepin Co., Minn., June 15.

* * *

Working in the Supers.

I am having some fun with the bees at present—swarming, etc. They are working in the supers nicely now. We are having lots of rain. A. J. Freeman.
Neosho Co., Kan., June 13.

* * *

Bisulphide of Carbon—Paralysis.

I have been conducting some experiments in the use of bisulphide of carbon in relation to bee-keeping. Even strong colonies in this climate will harbor the egg of the wax-moth, and this makes an item worth studying—how to preserve the frames of comb and honey other than allowing the bees to care for them.

I have found that I could tier the extra supers eight high with a close-fitting bottom, and a 3-inch rim between the top and the last super, place a saucer with four ounces of the liquid on the top of the frames of the top super, first sprinkling two ounces of napthaline among the frames, and that pile of 80 frames was safe for two months, when it is necessary to renew the bisulphide of carbon.

A word of caution is necessary in regard to the return of the combs to the bees. I found that altho only a slight trace of the foul-smelling stuff hung to the combs, it was enough to kill many of the bees in a colony. I gave two frames to them without first giving the frames a thorough airing.

A colony having developt paralysis so as to cease to be of value, I shook onto frames of foundation, introduced a new

Page & Lyon Mfg. Co. New London, Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

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They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

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that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

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E. T. ABBOTT, St. Joseph, Mo.

Mr. Abbott sells our Hives and Sections at factory prices.

Ho, for Omaha!

As we have many customers in the Northwest, and believing they will appreciate the low freight rates obtained by purchasing goods from a railroad center nearer to them than we are, getting a direct through-freight rate, thus cutting the freight in half, we have establisht a branch house at 1730 South 13th St., Omaha, Neb., where we will keep a complete line of all Apiarian Supplies, the same as we do at Higginsville, Mo. With the quality of our goods, we believe most bee-keepers in the West are already acquainted, but to those who are not, we will say that our goods are par excellent. Polisht, snowy-white Sections, beautiful, straw-colored transparent Foundation, improved Smokers and Honey Extractors, and all other first-clas sgoods, are what we sell. Kind and courteous treatment and honorable dealing our motto. On these bases, we solicit an order, feeling sure that if we sell you one bill of goods you will be our customer in the future.

☞ Progressive Bee-Keeper, 50c per year. "Amateur Bee-Keeper," 25c. Both for 65c. postpaid. Sample copy of the Progressive free, and a beautiful Catalog for the asking.

Address, **Leahy Manufacturing Company,** **Higginsville, Mo.,** or **1730 South 13th St., Omaha, Neb.**

The Bee-Keeper's Guide

This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published today. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "The Bee-Keeper's Guide."

Given For 2 New Subscribers.

The following offer is made to PRESENT subscribers only, and no premium is also given to the two new subscribers—simply the Bee Journal for one year:

Send us **Two New Subscribers** to the Bee Journal (with $2.00), and we will mail YOU a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both together for only $1.75. But surely anybody can get only 2 new subscribers to the Bee Journal for a year, and thus get the book as a premium. Let everybody try for it. Will you have one?

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We have a limited number of barrels of **very best Basswood** Extracted Honey, weighing NET about 280 lbs. which we are offering at 6 cents per lb. f. o. b. Chicago. Do you want a barrel or so of it? If so, address, with the cash,

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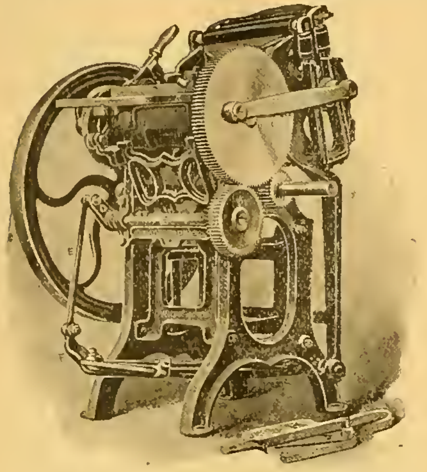

We have put in a new small Job Printing Press on which to print our own stationery, circulars, etc., and while being able to do this we may as well do some work for our readers, if they will favor us with their orders. If you want Envelopes or Letter-Heads, send 2-cent stamp for samples and prices. We will make right prices for neat, good work. All orders can be filled by express, at small charge, as the weight would not be great.

GEORGE W. YORK & CO.,
CHICAGO, ILLS

Southern Home of the Honey-Bee

Will continue to rear none but the **BEST QUEENS.** Untested, 50 cents; Tested, $1.00.

GEO. W. HUFSTEDLER, Prop.,
President of National Queen-Breeders' Union,
24Atf **Beeville, Texas.**

COMB FOUNDATION Wholesale and Retail.

Working Wax into Foundation for CASH A Specialty.

Hives, Sections, and a full line of Supplies. The **best** of everything. Write for Catalog, with prices, and samples of Foundation and Sections.

BEESWAX always wanted for cash or trade.

GUS DITTMER,
AUGUSTA, WIS.

QUEENS From the best strains of bees in this Country.....

I make the rearing of Queens a specialty. Untested, either 3 or 5-banded, 65 cents each. Tested, 95 cents each. **DANIEL WURTH,**
Falmouth, Rush Co., Ind. 24A3t

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Bee-Hives, Sections, Shipping-Cases—everything used by bee-keepers. Orders filled promptly. Send for catalog. MINNESOTA BEE-KEEPERS' SUPPLY MFG. CO., Nicollet Island, Minneapolis, Minn.

BEES! Florida Italian QUEENS!

Tested Queens, $1.00 each; Untested, 50c. Prompt and satisfactory dealing.

Address, **E. L. CARRINGTON,**
11Atf De Funiak Springs, Fla.

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Van Deusen Thin Foundation...

We have several 25-pound boxes of Van Deusen Thin Flat-Bottom Comb Foundation for sale, at $12.50 per box. This Foundation is preferred by many. As we have only a few boxes of it, an order for same should be sent promptly. Address **The A. I. Root Co.** 118 Michigan Street, Chicago, Ill.

queen, and after fumigating the old combs of brood and honey, returned them, and have not seen any signs as yet of the return of the disease. The bisulphide of carbon seems to destroy the germ even in its early stages.

I could not detect that the fumigation of comb honey injured it in any way, unless there was a slight shrinking of the air-cells under the cappings, while one such fumigation is sufficient, destroying even the eggs of the moth as sulphur will not do.

I wish to call the attention of bee-keepers to the use of bisulphide of carbon, thinking that some one of the fraternity will find that foul-broody combs will be cleansed by fumigation with it, since it would appear that it is a cure for paralysis. W. B. CHAPMAN.

Orange Co., Calif., June 11.

Very Wet Weather.

Our bees have wintered well, but so far we have had it very wet, and they could not get out much, making it necessary to feed them to keep up brood-rearing. I had one swarm June 8, and had to feed them the next day.

SANDFORD HARTMAN.

Lincoln Co., Neb., June 12.

Southern Honey-Plants.

Please give me the names and honey qualities of the enclosed flower. The first grows very thick in the pine meadows and looks at a distance like immense fields of grain, but I have been unable to find bees upon it, tho the long drouth may account for that.

The second is the blossom of a tree that grows in low, swampy places, along branches or ravines, and is quite eagerly sought by the bees. I do not think it is ti-ti, as that bloomed here over a month ago, tho it may belong to the same family. ERNEST W. HALSTEAD.

Ocean Co., Miss., June 6.

Plant No. 1 has, so far as I can determine, no common name. In scientific language it is known as *Lophiola Americana* and belongs to the *Amaryllis* family—a family nearly allied to the lilies, and is without honey value, so far as I am able to find out, altho possibly furnishing nectar.

No. 2 is the Southern "leatherwood" or "ironwood," (*Cyrilla racemiflora*), a very near relative of the sumacs, and hence doubtless a good honey-plant, as are the sumacs themselves. It also has, on the other hand, a near kinship to the hollys common in the South. I can find no reference to it in any honey authority I have, and hence it is doubtless an untested plant. H. S. PEPOON.

Another Improvement in Train Service

On Nickel Plate Road, train No. 6 leaving Van Buren Street Passenger Station, Chicago (on the Loop,) at 2:55 p. m. daily, for Buffalo and local stations, with Buffalo sleeper. Also New York sleeper via Nickel Plate and Lackawanna Roads. Rates always the lowest. The excellent train service to Boston and New York City, with through day coaches and sleeping-cars to New York City and through sleeping-cars to Boston, and the excellent dining-car service, will continue as heretofore. (34—24—2)

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, June 18.—Not any new honey here, and the old stock is about exhausted. Market values about as last quoted for what little is being done. R. A. BURNETT & CO.

Kansas City, June 9.—Fancy white comb, 12c. No. 1 white comb 11c; No. 2 white and amber, 10c; dark, 9c. Extracted, white, 5½@6c; amber, 5@5½c; dark, 4@4½c. Beeswax, 20@25c.

Stock of 1897 comb and extracted honey all sold. We have just received a shipment of white comb from Florida, the first of the season. C. C. CLEMONS & CO.

Cincinnati, June 9.—Demand is slow for all kinds of honey, especially comb. Prices for best white comb honey, 10 to 13 cents. Extracted honey brings 3½ to 6c, according to quality. Beeswax in good demand at 25 to 28c for good to choice yellow.

CHAS. F. MUTH & SON.

Boston, June 9.—Fancy white in cartons, 13c.; A No. 1 white in glass-front cases, 11 to 12c.; No. 1, 10 to 11c; No. 2, 8 to 9c. Extracted, white, 6 to 7c; light amber, 5 to 6c. Beeswax, pure, in good demand with very light supply, 30c.

At the present time the demand for both comb and extracted honey is very light with but little stock on hand.

BLAKE, SCOTT & LEE.

Cleveland, June 9.—Fancy white, 12 to 12½c.; No. 1, 11c.; No. 1 amber, 9 to 10c.; buckwheat, 8c. Extracted, white, 6c.; amber, 4 to 5c. A. B. WILLIAMS & CO.

San Francisco, June 9.—White comb, 8½ to 10c; amber, 6½ to 7½c. Extracted, white, 5½@6c.; light amber, 4¾ to 5¼c. Beeswax, 23@25c

The market is lightly stockt and in all probability will remain so throughout the season now opening, as very little honey will be produced in this State the current year. Supplies now offering are principally comb. Values for both comb and extracted are being well sustained at the prevailing rates, With no active inquiry for beeswax from any quarter, the market is easy in tone, despite the light stocks here and in the interior.

Detroit, June 9.—Fancy white honey is lower and now quoted at 11c. No. 1, 9@10c; fancy dark, 7@8c; No. 1 dark, 6@7c. Extracted, white, 5@6c; dark, 4@5c. Beeswax 27@28c.

There are no changes in quotations, and very little desirable honey left. Sales are so slow that it is difficult to quote. The poor lots are being pusht at what they will bring.

M. H. HUNT.

Minneapolis, June 9—Honey much more encouraging. Fancy white clover comb is selling here now at 10½@11½c. Not advisable to ship darker than amber. Extracted fancy white clover, 5½@6c; amber, 5c; dark, 4@4½c.

Outlook for honey much more encouraging.

S. H. HALL & CO.

Indianapolis, June 9.—Fancy white 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand. WALTER S. POUDER.

Milwaukee, June 9.—Fancy 1-pound sections, 11@12c; A No. 1, 10@11 cents; No. 1 8@10c; amber, 8@8½c; dark, 7@7½c. White extracted in barrels and kegs, 5½@6c; amber, 5@5½c. Beeswax, 26@28c.

The demand for honey continues very good indeed, and values fairly sustained. While the best grades are most salable, the inferior grades meet attention, and the movements are quite satisfactory. A. V. BISHOP & CO.

Buffalo, June 9.—There is a very good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

St. Louis, June 10.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

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I ARISE

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1 untested queen.	1 00
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1 select tested queen	2 00
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Select tested queen, previous season's rearing..	3 00
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About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

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38th Year. CHICAGO, ILL., JUNE 30, 1898. No. 26.

CONTRIBUTED ARTICLES

Divider and Wedges in Honey-Production.

BY S. T. PETTIT.

On page 321 appears an article from Mr. G. M. Doolittle, which seems to aim a huge stroke at my system of taking comb honey. Some of the article is based upon fact, some upon theory, and some of it upon nothing at all. He says:

"Of one thing all the advocates of this plan seem to be sure, which is, that unless the bees are forced to go from the fields to the sections with their loads of nectar, the same will of necessity be deposited by the bees in the comb-cells of the brood-chamber."

That assertion is based upon nothing at all. Respectfully, Mr. Doolittle, but you are mistaken. I never said so, nor even insinuate so much. I am not arguing the point whether the field-bees go direct to the cells with their loads, or whether they hand it over to young bees. The fact that the field-bees do pass over to the young bees a good deal, if not all, the nectar, is a very important factor in the success of my system. All who have made careful experimentations in that line know that where the field-bees go up the young bees will meet them. Now, if the field-bees go up at the center, the young bees will draw away from the outside and congregate at the center; but if the field bees go up at the sides and rear end of the hive, the young bees will distribute themselves to meet the field-bees where they go up, and thus the bees are placed just where wanted with their loads; and now, with a good divider placed at each side of the super to hold a lot of bees at the sides, the work will progress pretty evenly from side to side of the super.

All right, Mr. Doolittle, just in proportion as you press the point that the field-bees pass over their loads of nectar to young bees, you help my system of taking comb honey. I want something to induce the young bees to go to the outside of the outside sections and remain there, and your contention throws light upon and helps to understand the reason of the success of the system. I see that point more clearly than I did a year ago. I thank you for that article, as it helps to bring out and emphasize a very important point.

And now, Mr. Doolittle, if you will try the large entrance recommended, I believe your condemnation will be turned into praise. Yesterday many hives had large quantities of bees hanging out. I went around and slipt the wedges under, thus giving large entrances, and to-day, tho warm as yesterday, there are no bees hanging out. Before I raised them their entrances were $\frac{3}{8}$x17 inches.

Since the beginning I believe nearly every step in the advance of the arts and sciences has been opposed by some one, and I feel flattered to have so able an opponent as Mr. Doolittle. I have no anxiety about the future of my system—its success is certain.

Ontario, Canada, June 4.

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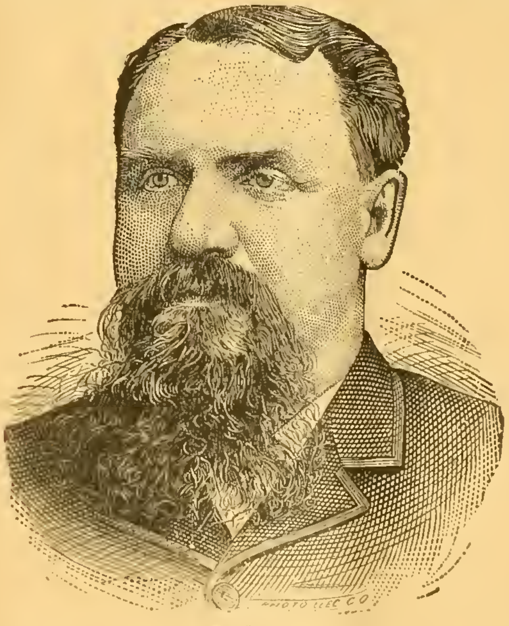
Profitable Bee-Keeping, with Hints to Beginners"—a series of nine articles by Mr. C. W. White, of England, will begin in the Bee Journal next week. See offers on page 410.

After-Swarming—How to Prevent It.

BY G. M. DOOLITTLE.

Probably there is nothing so perplexing to the farmer who keeps a few colonies of bees, or the novice with his decade or score of hives, nor, in fact, to the apiarist with his hundreds of colonies, as after-swarms. They are rarely wanted by any one, but are generally ever present to annoy, unless they are prevented from issuing by the apiarist. With box-hives and log-gums, coupled with the knowledge of 30 or 40 years ago, very few could do little else than let them issue at will. They were often returned, only to issue the next day, and often again on the same day, where they came out during the forenoon. The cry of "Bees swarming!" about as soon as we would get into the hayfield on some hot July morning during the fifties, and "Bees swarming" all through the day, decided my father to let this branch of agriculture alone, and as four-fifths of these bees were after-swarms, and not being wanted, they were the ones which gave the verdict, or caused it to be given.



G. M. Doolittle.

But since the frame hives came into general use, this after-swarming nuisance can be prevented, but in order to do this we must know the conditions causing their issue, and when they are to be expected. One of our oldest bee-keepers, and one who has had years of experience, was heard not long ago to give expression to these words:

"A queen usually hatches on the eighth day after the first swarm issues, and it is on that day that the second swarm will come off." This I consider a mistake, and I am led to reason that if our oldest bee-keepers do not fully understand under what circumstances after-swarms issue, a few words to the novice, and those not professing to be informed on this subject, might not be amiss.

After years of study on this point and most careful watching, I find that where the colony casting swarms is in a normal condition, the egg intended for a queen is deposited in the embryo queen-cell from 3 to 3½ days before it hatches into a larva. This larva is in the larval form from 5½ to 6 days, at which time the cell containing it is sealed. After the cell is sealed it is in the chrysalis form 7 days, making a period of about 16 days from the time the egg was deposited in the cell to the time the queen hatches.

When the queen first emerges from the cell she is a white, weak thing, unless kept in her cell after maturity by the workers, as all who have handled queens well know, and is no more fit for leading out a swarm than she is for egg-laying; but during the next 48 hours she gains strength rapidly, so that when she is about 30 to 36 hours old she begins to "pipe" or "peep," as it is termed; and when she is from 48 to 60 hours old she is ready to lead out a swarm, where there are rival queens in other queen-cells.

From the above it will be seen that the second swarm does *not* issue on the day the young queen hatches, but about two days afterward, if the weather is propitious. This, I believe, is according to M. Quinby in his "Mysteries of Bee-Keeping Explained," which I have always found to be very nearly correct on all topics on which it treats.

Some may object to the term "leads out a swarm," and if it were applied to the first or prime swarm it would not be correct, for with a colony having an old or laying queen the bees seem to be the leaders in the swarming movement, but with all after-swarms the case is different, for with these we find the young queen first, or among the first, to leave the hive.

When a colony is in a normal condition, or when an apiary is not affected with the swarming mania, the first swarm issues with the sealing of the first queen-cell, unless kept back by unfavorable weather or circumstances. By issuing upon the sealing of the first queen-cell I mean this: If the cell is sealed at sometime during the hours of 8 to 12 a.m., the swarm is likely to issue from 12 m. to 3 p.m. of the same day; but if sealed from 2 p.m. to 8 a.m., then the swarm will doubtless issue during the forenoon, so that in the latter case, which is the usual one, the cell will be sealed anywhere from one to 18 hours before the swarm issues.

I have been particular in this matter, so that we could know just when to cut off the queen-cells to prevent these after-swarms. If we cut off all the cells but one on the fifth or sixth day after the issuing of the swarm, as has been recommended many times, we are not sure that the cell left will hatch; and, furthermore, the bees still have larvæ young enough to convert into queens, which they are almost sure to do, and in this case they will often kill the queen which hatches first instead of allowing her to destroy these later-started cells, when we not only have as many after-swarms as we should have had had we not cut the cells, but we have also the disadvantage of having queens reared from old larvæ, which all concede gives inferior queens.

Now, if we wait about this cutting of cells till the eighth day we shall run no risk of the colony swarming; where the first swarm was not kept back by foul weather there will be no larvæ young enough to convert into queens, and, as a rule, the first young queen will be hatcht, and thus we can make a sure thing of the matter, if we are sure we cut off *all* the queen-cells there are in the hive. For these reasons I now wait till the morning of the eighth day after a prime swarm has issued, when I open the hive, take out the first frame and hastily glance over it for nearly-ripe queen-cells, and if none are found I shake the most of the bees off near the entrance of the hive, into which they will immediately run, when the frame is closely inspected for queen-cells, peering into every nook and corner for them; for, should some small, crooked one be mist, swarming would surely result.

All cells are cut off after a frame has been shaken to rid it of bees, for this shaking of the young queens in their cells is likely to cause them to be deformed, if not killed outright. The next frame is treated in the same way unless ripe cells are found, in which case it is set outside of the hive awaiting the finding of a cell from which the queen has hatcht, when all are cut off. Should none have hatcht, then the best one of the ripe cells on the frame set out is saved and put back into the hive.

In this way we can make sure that no after-swarm will issue from this hive, and it is the only certain plan that I know of, and this I say after having tried nearly all of the plans ever given to the public, and quite a few that were given privately to myself. Onondaga Co., N. Y.

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Every Present Subscriber of the Bee Journal should be an agent for it, and get all other bee-keepers possible to subscribe for it. See premium offers on page 410.

A Few California Notes and Comments.

BY W. A. PRYAL.

I notice that many, yes, all the California correspondents in the American Bee Journal mention the dry year in this State, and the failure of the honey crop. This may be all right for the southern and the greater portion of the central portion of the State, but I am having the best honey crop I have had in five years. I will get over 60 pounds per colony. If I had known the year was going to be so propitious here, I should have managed to work the whole apiary for honey.

Do you know, I have not so much faith in the honey-gathering propensities of the Italians as I used to have—have had 20 years' experience now. This is a good year as a test. I find that my darkest bees are as good as any Italians, and they are just as gentle, too. One or two colonies of them have beaten the best "Dago" blood in the yard. I have been running for extracted honey. Still, as I like the looks of the "Dagoes" the best, and as the queens are far the easiest to find, I am going to bring, as nearly as possible, all the dark bees to pure Italian blood. I am requeening all dark colonies this summer.

So Mr. Newman complains of the cold winds in San Francisco. Well, he should come to this side of the bay, where there is a decent climate. I pity the poor soldiers who are encampt on the Pacific side of San Francisco. 'Tis mighty cold and desolate there. Uncle Sam should look after the "boys" better than he seems to be doing. I saw Gen. Merritt in San Francisco to-day on Market street; I had a mind to stop him and command him to remove his troops to a milder climate—to Oakland, for instance; but I was afraid that he would tell me to mind my own business; or, perhaps, he might have said, "Just wait awhile and I will give them plenty of warm climate in Manila." Perhaps that would be a good climate for Gen.-(Manager) Thomas G. Newman, too. The next time I see him I will suggest that he take his Philosophical Journal to "pastures new and fresh"—in Manila.

I notice in the American Bee Journal recently that my friend, J. H. Rambler Martin, intended to run an apiary in the northern portion of the State. Those southern California folks only have to live long enough to find that if they want to get a living off the earth in this State they have to move up north. That is what sheep and cattle, even, are doing this year. 'Tis dry as a bone, so I'm told, down below.

I might remark that the rains that we should have had in April have been falling during the past two weeks, and the prospects are that they will continue to do so at intervals during June. Of course, rain at this time is bad for the fruit crop and hay that has been cut, or that is ready to cut. But it has been invaluable for late-sown grain, vegetables, and pasturage on the lowlands. Hay had run up to $27 per ton before the late rains; now it is between $15 and $20. The usual price at this time is from $8 to $12 per ton. If we had not had this recent rain, thousands of head of horses, cattle and sheep would have to be wantonly killed—just for their hides and tallow.

I hope honey goes up in price—I have a lot for sale. What has the war done for honey, so far? No Cuba honey now, I guess. Alameda Co., Calif., May 31.

⁂

FACING COMB HONEY.

Opinions, Suggestions and Advice from the Commission-Men.

[Continued from page 386.]

[We have received the following response to our letter on page 371, since our last week's issue.—EDITOR.]

GEORGE W. YORK & Co.—

Gentlemen:—Replying to your kind favor, we will say that we have read the letter on the "facing comb honey" question, and also remarks by other dealers regarding the matter; we are also much interested in the subject, and wish to bear record that we are *emphatically* and always in favor of comb honey in sections being placed in the cases so that when the face or glass side of the case is presented, the seller and the buyer will *know* that all the sections in the case are fairly and truly represented by the front or face. While in all the relations with each other a good appearance is very desirable and pleasing, it also augments our pleasure, and prevents misunderstandings and unkindness, and ill-will, to know that we are not subjects of deception by appearances.

We are in favor of conducting business on the principle of right, and in a way that will increase confidence and faith in each with the other; we believe that there should be friendship in trade, and are sure it cannot come through the practice of selling an appearance of good and then deliver in fact that which is not good. We have talkt and written many volumes to our honey-shippers to encourage the idea that we desire our shippers to be of that character that it would not be necessary for us to open a case of honey to prove that the back sections in a case were *not* just as good as the first or face sections, and we are pleased to report that we have many shippers for whom we have sold honey, and when the question came up, as it always will from the customer, about how it will run, and if the quality is as good all through the cases as represented by the face of the cases, we at once reply and assure our customer that it will, and then go farther and say if there is one section in the case that they can find which is of a poorer or inferior grade than represented by the face, we will give them two sections for every one of such found.

It seems to us a matter of no small consequence, and involves a very important question in business relations. Ask your correspondent how he would like to send an order for a case of fresh eggs, receive a case, and find a layer on top of choice, sweet, fresh eggs, and all the rest of the eggs in the case old and rotten! What sort of an opinion would he have of the merchant who sent him the eggs? And when he wanted another case of eggs, would he send the order to the same merchant?

The relation of the commission-man to the producer is a vital one, and the shipper should encourage honesty, and place himself with the commission merchant in the relation of a partner, and not as a tool or an inferior being who is expected to *lie* and *cheat*, and get just as much value and make as quick returns and realize just as much money for a shipper who sends in goods falsely packt or carelessly handled, as for one who puts up his goods—honey if you please—truly represented in quality and weight, showing honest care for the good name of himself and the commission merchant whom he employs, or with whom he has formed a co-partnership to handle his shipment; also a kind consideration for the customers whom the merchant invites to buy, and recommends the goods to be as represented.

After a long experience in selling property for others, we find the most difficulty in giving satisfaction to the shippers of inferior quality of goods, and it comes from the vicious principle of trying to work off through the agency of the commission merchant property which the shippers find difficulty in disposing of at home, and expect through this agency to obtain as much as for a good, salable quality.

Much more might be written on this subject, but time and space forbid. A. V. BISHOP & Co.
Milwaukee.

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Contraction of the Brood-Nest—A Reply.

BY W. Z. HUTCHINSON.

In a late issue of Gleanings the editor referred to the contraction of the brood-nest as a "fad;" classing it with self-hivers, etc. From the tone of Mr. Root's remarks it is evident that he has misunderstood the time and manner in which contraction of the brood-nest has been practiced. For instance, he says:

"But, oh, how the bees did swarm, and no wonder! The whole trouble was that queen did not have brooding space enough; and the bees were quick to catch on to the fact; and the result was the queen and bees connived together for larger quarters."

Mr. Root, so far as I know, no one has practiced contraction of old establisht colonies, those that had their brood-nests filled with bees, brood and honey—it was only in hiving swarms that contraction was practiced. It is *possible* that some practiced contraction with establisht colonies; it seems that you have understood it that way, but you are the first man that I have ever met who so understood it or practiced it. I have corresponded with many of the prominent bee-keepers who practice contraction of the brood-nest, have met many of them, and visited the apiaries of many of them, especially here in Michigan, where, as you say, contraction is practiced most extensively, and I have yet to know of a bee-keeper who contracts his brood-nests except in hiving swarms. If there are those who contract the brood-nest of establisht colonies, do it in the spring, or just before putting on the sections, or if there are those who have practiced it and abandoned it, I hope they will speak out, for it will be news to me. According to my views and experience, it would be a most unwise course to pursue.

In the first place, we need to rear all the bees possible before the opening of the main honey harvest. We must have the workers or the harvest will be in vain. To rear them there must be cells in which to cradle them while babies. We need all of the cells that an ordinary queen will keep full of brood; and enough other cells for the storing of the honey and pollen to be used in caring for the brood. When the coming of the harvest finds these combs all filled with brood, honey and pollen, there is nothing to be gained in taking out some of these combs and putting in dummies. If the brood-nest is full when the honey comes, the surplus must go into the supers.

I am at a loss to conceive where, how or why there could have been conjured up the idea of contracting the brood-nest of an establisht colony in the spring or before the opening of the harvest. There is only one instance in which I could think it advisable. If a colony were weak in numbers, and the harvest already present, and it was thought advisable to secure some comb honey from that colony at all hazards, then a taking out of the occupied, or partly-occupied, combs and putting dummies in their places would force the bees into the sections; but with colonies in which the brood-nest is full of bees, honey and brood, contraction of the brood-nest is wholly unnecessary.

Contraction of the brood-nest in hiving swarms when working for comb honey is an entirely different thing; and when practiced intelligently in the right locality is a most important factor in securing a crop of honey. Here in Michigan, and similar localities, the surplus white honey is gathered in a short period—never extending over six weeks; usually lasting only a month; and sometimes the main harvest is all gathered inside of two weeks. Then comes a period of a month or six weeks in which no honey is gathered; this being followed by buckwheat or fall flowers in some localities. In some localities, like the one in which I am now situated, white clover furnishes the only surplus. Years ago, in localities similar to mine, when contraction of the brood-nest in hiving swarms, and several other "wrinkles," were unknown, how often we heard even the veterans lamenting the issuing of swarms, because, they said, with the swarm went all hopes of surplus. As the business was then conducted there were good grounds for lamentations. The management was about as follows:

The swarm would be put into a 10-frame hive, and no supers put on until the hive was filled. If they were put on they would not be occupied until the lower hive was filled, and by the time this was accomplisht it usually happened that the white honey harvest was past. If the old colony did not swarm (usually it did) some return might be expected from that, unless the season was nearly over. If a colony is in condition to begin work in the supers at the opening of the white honey harvest, and continues faithfully at work without swarming, as I have already said, no contraction is needed; but, suppose the harvest is half over, the bees working nicely in the supers, there may be one case of sections nearly ready to come off, another two-thirds finisht, and a third in which the work has only nicely commenced; now the colony swarms. What shall be done? By hiving the swarm in a contracted brood-chamber, upon the old stand, transferring the supers to the newly-hived swarm, and practicing the Heddon method of preventing after-swarming, work will be resumed and continued in the supers without interruption, and the surplus will be nearly as great as tho no swarming had taken place.

In brief, contraction of the brood-nest, coupled with the plan of putting the swarm on the old stand and practicing the Heddon method of preventing after-swarming, enables us to throw the whole working-force into the super just at the critical time, and secure a crop of white honey that would otherwise have been stored in the brood-nest or used in the rearing of bees that would have come upon the stage of action when about the only thing that they could do would be hang on the shady side of the hive.

We all know that white honey brings a higher price than does the dark honey gathered in the fall; while the latter, unless it may be in some few special instances, is equally as good for winter stores. The contraction of the brood-nest in hiving swarms puts this white honey in the market and the cheaper grades in the hive for winter.

It has been urged against contraction that it results in small colonies at the end of the season. If it is carried to too great an extent, or too long-continued, it certainly does. If a man wishes to turn bees into honey, contraction will enable him to accomplish his object. If colonies are too weak in the fall as the result of severe contraction, they must be united;

but the course pursued by nearly all who practice contraction is to enlarge the brood-nest again in time for the colony to build up for winter.

If the locality is such that there is a continuous flow through the whole season, or if the main flow comes in the fall, as is the case in many localities, it will be readily seen that little or nothing would be gained by contracting the brood-chamber of swarms. There would be time in which to fill the brood-chamber and be all ready for the fall flow when it came.

Mr. Root speaks about the small crops of honey that have been secured, that perhaps 25 or 30 pounds were the average, and that some Michigan bee-keepers thought that they were doing well if they got 10 pounds to the colony, and he rather intimates that these are the results of contraction. He well knows that we have been having some very poor seasons of late, with the exception of the last year or two, and it seems scarcely fair to attribute them to contraction of the brood-nest. I have been practicing it now for at least 15 years. One year I got no surplus, and neither did those who did not practice contraction. By the way, I did not practice it *that* year, as there were no swarms to practice it on. Other years my surplus has varied from 10 pounds a colony to over 100 pounds. Perhaps the average would be about 60 pounds. Both Mr. Heddon and Mr. Taylor have practiced contraction for years; and it does not seem as tho bright men like these would continue a practice that they did not find advantageous.

But let us not forget in this discussion that there is a difference in localities, as I have mentioned. This is really very important. It is so difficult for us, sometimes, to comprehend conditions with which we are not personally familiar. Mr. C. P. Dadant and myself used to have arguments over the size of hives; and I can see now that we were both right, according to our localities and methods.

Since the foregoing was written, Gleanings for June 1 has put in an appearance, and I notice that Mr. E. R. Root, in his advocacy of large brood-nests, says that some one else says, "Oh, yes, every one believes in two or more stories when running for extracted." Then Mr. Root says, "Well, try it for *comb* honey; it will cost you nothing." Suppose, Mr. R., that you try a few colonies with two or more stories for a brood-nest in working for comb honey, and *see* what it will cost you.

As I have said so many times in reference to these "fads," if you must try them, do it on a small scale first. If you find it is profitable to double or triple the size of your brood-nests do it by all means, but first find out that it *does*.

Just one more word: If many, or any, of the experts who formerly practiced contraction as I have explained it, have "gone back on it," as Mr. Root says he believes they have, let us hear from them, with the reason *why*. It matters little which of us, Mr. Root or myself, is right, if we only get at the truth.—Review.

"California Squalls," for a Change.

BY SKYLARK.

MR. EDITOR:—We have "California Notes," "California Echoes," and why not "California Squalls?"

TO FACE OR NOT TO FACE?

I am now squalling for Mr. Doolittle. Altho they have wallopt him unmercifully; altho they have torn his shirt, pants and vest to tatters; altho his face and hands are begrimed with mud and dirt; altho his foes have wiped up the whole country with him, I will not desert him. Never, never! Come over here, Mr. D., and see how beautifully your excellent doctrine pans out. Here is a sack of potatoes. The commission man has never opened it, and *won't, if he can help it.* Large, smooth, and beautiful, they bulge out of the sack—hardly held in by the strings. Bottom and top and sides are alike—XXX. But throw off 6 inches from the top—do you suppose you will find XX? Not much. The whole center of the sack is filled with the merest scrubs—away down to z—ero —*buckwheat honey!* Is this honest? Of course it is—they are shipt by the thousand sacks *on commission!*—and the unsuspicious tenderfoot is beguiled.

No. Let us be honest. I was raised and have been in commercial pursuits nearly all my life. I have not the least hesitation in saying that Mr. D.'s way of packing honey—or anything else—would be lookt upon as an intentional fraud. I am sorry—no, glad—very glad, Mr. D., that you have come out of this battle with your masts shot away, your engines disabled, and your hull torn into smithereens. It was only a slip of the tongue—or pen! Come to my arms! Poor boy!

THE NATIONAL PURE FOOD LAW.

The sending of Secor and Abbott to the Pure Food Congress was a master stroke of policy. It is fraught with greater good to bee-keepers than any act performed by *any* association since apiculture became a regular pursuit. It will be recognized, in the coming pure food law, as an industry to be fostered and protected by National law. National protection is very different from that of the State—no matter which one. Evil doers are much more afraid of National law than any other. The Government does not give up the hunt for a criminal just because he is not at home, or that he has gone around the corner to sharpen his crowbar, to break open another mailbag. The United States is not a boy of that kind. Here is a case in point:

On a stage-route from my native city to a little country village the stage was held up and the mail robbed three successive nights. A detective was put on, and found out the robber only got altogether $15, and that it was a boy 18 years old; but he followed him—followed him from city to city, and from State to State; followed him for three years! Finally he treed him in Florida and brought him home to Pennsylvania. He got 15 years in the penitentiary. Fifteen years for the paltry sum of $15! This was the most outrageous time-card I ever got. Fifteen dollars!

Now, Mr. Editor, I don't want any of your suspicions, innuendoes, or insinuations. I never was in the penitentiary in my life—but once—and then I went to collect a bill for $34, which was paid on sight. There, now.

But this is the way the United States executes her laws. No expense is spared to detect the criminal, and his punishment is sure. Therefore, if we can get a National law against the adulteration of honey, it will settle the price of it, as distinguisht from glucose. I have no doubt that the extracted honey of the whole country is just doubled by glucose. Now cut off the glucose, and honey *must* and will go up. The most astonishing thing to me is, that bee-keepers should be so blind, heedless and penurious as not to see this and join the United States Bee-Keepers' Union. It has now more members than the other Union, but it has a wider range of usefulness, and a greater mission to accomplish.

The bee-papers should all make a rule to exclude the articles of all writers who are not members of the United States Bee-Keepers' Union. This would more then treble the membership, for what won't a man do to hear himself howl? I know this proposition will bring down an avalanche of inverted applause. But let it come! I have 300 battleships, 600 gunboats, and 900 torpedo boats and destroyers; and I can whip the united world—on this subject.

Squalltown, Tenderfootland.

A Bee-Keeper in Bad Luck—A Laughable Incident.

[A German bee-journal, Blæter fur Bienenzucht, has the following story which has been translated into the French Revue, and is good enough, I think, to have an English setting.—DR. C. C. MILLER, in Gleanings:]

At the apicultural exposition at B., Antony Bumke became the happy possessor of an Italian queen. How he admired it with its eyes of gold, and its abdomen of yellow and black rings! In order to take it to his hive he made a box like a Swedish match-box, only, instead of a wooden cover he used a cover of paper pierced full of little holes. With the queen he imprisoned four workers. "She'll not be so lonesome," said this sensible young man.

What fine things he promist himself with the progeny of this queen, and with what joy he felt the little box in his trousers pocket! But he must, before taking the train for home, send a telegram to his betrotht and his future mother-in-law, whom he expects to greet for a few moments as the train passes the second station. Time presses, the train is about to start. The engine whistles, Antony makes rapid strides across the platform, and jumps into the first coach he comes to, the coaches being still of the ancient pattern that contain only a few passengers, these few being lockt in by the guard, like so many prisoners. In his headlong haste he stumbles over the extended legs of an old gentleman, and his head strikes forcibly against the sharp knees of a precise-looking spinster, whose fright is exprest by loud cries. With a thousand apologies he succeeded in seating himself, when he overhears the hardly surprest remark, "The fellow is drunk," a remark which only deepens the blushes of the bashful young man.

He seeks, by his tranquility and upright bearing, to efface this unjust opinion, but, unfortunately, he feels a strong tickling on his right leg. Furtively, Antony feels over the affected part, and in so doing brushes against his next neighbor, a big, Jewish butcher's wife.

"Don't let that happen again," she snapt out.

Antony reddened to the ears anew; but the next instant, with a wild look, he sprang into the air.

"You ought to be ashamed of yourself, to come among decent people in your present condition," said the old gentleman with threatening looks. "Such things ought not to be tolerated. It's an outrage!" he growled from his corner.

At this moment Antony feels anew a violent stinging. Summoning all his courage he bravely plunges his hand into his pocket. Mercy! he is not mistaken; the box was broken, and the cover crusht at the time of his fall when entering the coach, and there is no trace of either queen or workers.

And now that sting in two places! Antony utters a savage cry and leaps anew into the air.

"Mercy on us! He's going crazy," says the butcher's wife.

"Conductor! Conductor! let us out. There's a madman here," cry all the passengers.

Antony Bumke emits piercing yells.

"In the name of heaven! he's going into a furious delirium!" says the spinster.

"Silence! silence!" commands the old gentleman. Then turning to Antony, he says, "What's the matter? Tell us."

"I can't stand it any longer," cries Antony, "they are gone—every one of them! they sting—I am stung already! Leave the coach! It is very important that I should be left alone. Otherwise you may all be stung."

"He is mad! An escaped madman! Conductor!" cry all the passengers, beside themselves.

The conductor appears at the window. "Presently, ladies and gentlemen; the train is just going to stop. What! An escaped lunatic? The matter shall be lookt into immediately."

The engine shrieks—station N. Full of affright they all precipitate themselves from the coach; and the station-master, informed by the conductor, slowly approaches; and when the passengers are all out but Antony, he carefully closes the door, posts himself before the open window, and commences his examination. "So this is an escape. You acknowledge it."

"Without doubt—certainly; they've all escaped," declares Antony, very much agitated.

"All?" says the station-master. "How many of them were there?"

"Five," says Antony, groaning; "four workers—their loss wasn't much—but the queen is gone, too."

"What? A queen? What was she like?" said the station-master in a bantering tone.

"Oh! she had eyes of gold, and the back part of her body was covered with rings of yellow and black."

"Beautiful queen!" said the station-master, laughing. "And what were the others like?"

"Why, just like all workers. One bee is just like another."

"Come, now, keep your thoughts together, young man, and don't go to getting bees in your head again," said the station-master severely.

"I haven't them in my head," said Antony, groaning, "but in—"

"And where then?" said the station-master, laughing.

"In my—in my—pants!" This last word Antony whispered in the ear of his interlocutor. "I had a hole in my pocket—they slipt through it."

"What slipt through?" askt the confused station-master.

"Why, the queen and the four workers."

"Ha! ha! ha! a queen and four workmen in his—ha! ha! ha!" laught the station-master. "Come, be quiet. What are you crying about still?"

"Oh! oh!" cried Antony; "I can't stand it any longer."

The bell rings. Laughing as he goes, the station-master directs his steps to the telegraph operator to give orders to the next station concerning "the lunatic."

The train is in motion. Antony is alone. He can no longer stand those stings. Rapidly taking his determination, he takes off his pantaloons and approaches the window. Three bees gaily soar aloft into the air, but two stick tightly to the pantaloons. However, they must be got off, and Antony shake his pantaloons out of the window. "A pleasant journey to you, miserable queen," said he dolorously, when, at that instant, whiz! went the express train by on the other track. It seemed to the poor fellow, more dead than alive, that his head was torn away, but it was only his pantaloons that the express train had carried away triumphantly, and for good.

Antony Bumke stood petrified. It was night in his soul. He remained some time without thought and without——. The muse itself, horrified, veils its face.

Again a whistle, piercing, to make one shiver to the marrow. To Antony it sounds like a funeral-knell. The train stops boldly before a platform filled with people. They are there, his intended, his future mother-in-law, with many of their acquaintances. Ashamed, he hides himself, for the door has just been opened. The conductor appears; he makes a sign, and the station-master approaches with two officers. They seize him.

"He has drest himself up now," said the conductor, laughing.

"Silence!" said the officer. "Bring a cloak." The second officer takes off his cloak and puts it on Antony. A struggle ensues, and the miserable youth succeeds in jumping out of the coach. The officer seizes him; he tears away, and the cloak remains in the hands of the officers. A cry escapes from two mouths. Blushing with shame, his intended turns away her head; the future mother-in-law is turned into a pillar of salt. Before their eyes Antony is again seized by his persecutors, and shut in with them in a charitably closed carriage.

By mail the thing ought to have been explained away at a later date. But Antony Bumke never had any further desire to try new races of bees, nor to attend bee-shows, and equally he never revisited his enamorata, for she wrote him that she had no desire to marry a sans-culotte.

Ah, yes; he was a bee-keeper in bad luck.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

What Caused Their Actions?

1. One of my colonies of bees came rushing out of the hive one morning about eight o'clock, on the alighting-board, and there were enough bees for a swarm, but it did not swarm, and went back into the hive at night. It has been 10 days ago, and they have not shown any more sign of swarming. What is the trouble?

2. Another colony laid out around the hive for 10 days and went back, but the hive is full of bees. I put supers on both hives to-day, as they did not seem to be working to suit me. Did they kill the queen, or what is the trouble?

MISSOURI.

ANSWERS.—1. I don't know. If they didn't get any farther than the alighting-board, it hardly looks like swarming.

2. It is possible that they prepared to swarm, and then the weather or the honey-flow was so unfavorable that they gave it up.

Two Queens in a Hive—Cell-Protectors—Transferring.

1. I sent for some queen-cell protectors awhile ago, but I got no instructions for using them. How are they used?

2. Some time after getting the protectors I had a capt cell, but did not know just the age of it, and waited for some days to see about it, and when, sometime later, I went to examine it, it was broken open, and I thought it was done by the bees, but judge of my surprise when some 10 days later I lookt again, and there were two queens walking around on one frame, and the young one laying eggs before my eyes. I did not know what to do with them, as none of my colonies were strong enough to take any brood away to start a nucleus, so I concluded to leave both in the hive, where they still are. The young queen must be now about 15 days old, if not more. The old queen has her wings clipt, and the young one has her flying gear all right.

3. I askt some time ago about the best time to transfer bees. Mine were not strong enough in fruit-bloom, and as the weather was very bad at the time I did not attend to it. If I I do not want any increase, would it be safe to do it now? Would the young brood remaining in the old hive be safe after drumming out the queen and bees? ILLINOIS, June 2.

ANSWERS.—1. You will hardly need any special instructions for use of cell-protectors, after understanding the special object they have in view. It is to protect the sides of the cells so that the bees cannot bite into them, at the same time leaving the end of the cell free so that the queen may make her way out whenever she desires. For it is a curious fact that bees do not tear open a queen-cell at the end when they wish to destroy the occupant, but at the side. When a queen is taken away from a colony, or when a nucleus is formed by taking bees and brood from a colony with a laying queen, if a cell is given at once it will invariably be torn down. Put it in a cell-protector, point foremost, so that the tip of the cell will project a trifle through the opening, twist up the four ends of the wire cloth so the bees cannot enter the protector, then put it in the colony or nucleus where you want it to hatch. You can put it between two brood-combs which will press together just enough to hold it, or you may tie a fine wire to the twisted part, tie the end of the wire to a small wire nail ¾ to 1¼ inches long, and lay the nail across two top-bars, letting the nail support the protector.

2. It is not a very unusual occurence to find a mother and daughter laying side by side, but usually the mother is about exhausted and will soon be missing.

3. Yes, it is safer to transfer at any time when honey is coming in. The chief reason for taking the time of fruit-bloom is because at that time there is so little honey in the hive. If your bees have swarmed, you will find the best time to transfer is three weeks after swarming, as at that time there will be no brood present except perhaps a little drone-brood that you don't care to save. If you drum out when the queen is present you must leave enough bees to take care of the brood, altho it will take no more bees to do so now than in fruit-bloom.

The Queen-Trap in Swarming.

Will you please let me know to what extent the Alley trap has been used, to your knowledge, and with what success in controlling swarming? What per cent. of queens will enter the trap, and how many of them will crawl back through the cone? I have had no experience with them, but have tried, or studied, about all other methods to prevent and control swarms; and to produce comb honey contraction proved a failure—success lies in the opposite extreme. The bees have been repeating this lesson day after day, in season and out, and at last I comprehend. I think I can control swarming and prevent increase in the out-yard as well as at home.

ILLINOIS.

ANSWER.—I cannot give you a satisfactory answer from much experience, for I've had very little experience in that line. I have an impression that a good many of the Alley queen-traps are in use, perhaps not so largely by those who have large numbers of colonies, and that you may quite safely rely on the queen going up through the cone and staying up. Possibly some of those who have had experience will tell us what per cent. of the queens, if any, fail to go up into the trap, and what per cent. go back through the cone.

Heated-Plate Plan of Fastening Foundation in Sections.

What is the "heated-plate plan" for fastening foundation recommended by G. M. Doolittle, on page 245?

NEW JERSEY.

ANSWER.—The Daisy fastener, of which Mr. Doolittle speaks none too highly, has a metal plate that has a lamp placed under. The section is put in place, the starter is allowed to slide down with its edge resting against the hot plate, and the hot plate is immediately slipt out from under the starter, letting it come in its proper place on the section, where it quickly cools, making a secure attachment.

A Whole Lot of Questions.

I was so late in getting my supplies that it has ruined my honey crop. I put my largest colonies into hives with 13 frames, and they filled them; then I put on another story the same size. My frames are 12x12, and they would not go up. Then I took two frames of brood out of the bottom story and put them into the upper. Some of them reared the brood, and others came down, and one of them sent out a swarm. Another went to work in the upper story.

1. What will stop them?

2. If I put the bottom story on top, will that make the honey too dark to sell?

3. I have eight colonies in 11-frame hives, frames 12x12; they filled them before I got the sections. I have smoked some of them up, and with all I can do they will not go up.

4. To-day (June 10) I put the super of sections under the brood until they started in them. How do you think that will work?

5. Last night I put queen-traps in front of some that I am sure would have swarmed if I had not done so, but they are packt close in the trap. Will the trap prevent them from working?

6. If I can save the queens when they swarm with about a quart of bees, and build up with brood after the honey season is over, will that be a cheap way to get a stock for next year?

7. In one colony the bees seem to be so large that they can hardly get through the Root zinc. Have you ever heard of such a thing? Some stay out all night on account of being so hard to get through. What is the best to do?

8. Is it necessary to put a mat on top of the frames or sections in summer, if the bees do not go above it? If so, ought not the mat go on flat, or have a bee-space under it?

9. Ought the bees be disturbed in the honey season, to cut out queen-cells?

10. I cut drone-comb out of only one hive this year, and there are not as many drones this year in 15 hives as there were last year in one. Do they ever swarm without rearing drones?

11. My bees put comb and honey between sections and brood. Do all do that?

12. Can you tell the day before a colony sends out a swarm? If so, how?

13. Ought the bees to have ventilation on top in summer?

14. What will keep bee-stings from swelling? I don't mind the hurt, but I have to stay from church on account of a swelled face.

15. I had a swarm Monday, and hived them, and late in the evening they came out and settled on a limb, then left the limb so slowly that I could not tell where they went. Did they go away, or into some other hive?

VIRGINIA.

ANSWERS.—1. You would have pretty certainly stopt them from swarming if you had done a little more mixing of the brood with the empty frames. Take two or three frames of brood from the full story and put in the empty story, and put the empty story *under* the full story, alternating the full frames with empty ones. If they have not already started queen-cells, they will not be likely to do so, and if they have, cutting out the cells may stop them, after you have them scattered through the two stories. It will help the matter no little if you have an entrance to each story, or in some way ventilation between the two stories, and even ventilation at the top.

2. If you mean to cut the honey out of the frames, it would not do very well. More likely you mean to extract, and in that case it will be all right. Honey in new combs is a little whiter after being extracted, but there isn't a big difference, and generally it would not be noticed.

3. Don't try to smoke bees into sections. Even if you forced them up with smoke they wouldn't stay there. Don't try to drive them; coax them. Put in the super a section that has been already partly filled. If you have none of that kind, cut out a piece of comb from a brood-frame and fasten in the section. A piece of drone-comb will do, and if it has drone-brood in it they'll be more sure to go at once.

4. Better do the other way.

5. Of course it will hinder a little, but with plenty of room inside they may stand it all right.

6. I'm a little afraid you're fixing to get into trouble, with the idea that after you've taken away the old queen with a quart of bees the colony will not try to swarm again. They surely will, and with a young queen. Better not try your plan on more than one colony, for you'll not be likely to like it.

7. Yes, Dr. J. P. Murdock has a strain of bees that are larger than common, and I think it is in Cuba they complain that bees get too large for ordinary perforated zinc. If I had that colony, I think I'd manage to let them get along without perforated zinc, giving them abundance of room.

8. It depends on what your arrangements are. If you have board covers like many others, that leave only a quarter of an inch or so between the section and the cover, there's no need of any mat. If there's an inch or so of space between the sections and the cover, the mat will probably be necessary, but in some cases they might do all right without it.

9. It is well not to disturb bees unnecessarily, but some of our best bee-keepers think it pays well to disturb enough to cut out queen-cells.

10. They may.

11. Probably they do, if there's room enough. There ought to be only ¼-inch between top-bar and sections, and even then they may build some.

12. There's no sure way. If they hang out and are idle

when other bees are busy, it looks suspicious, and if you find sealed queen-cells present that's also a sign, but you can't be sure. Sometimes they have queen-cells and don't swarm; sometimes they swarm and have no queen-cells. Sometimes they hang out without swarming, and sometimes they swarm without hanging out.

13. They seem to like it, but it hinders the finishing of the sections that come nearest the opening.

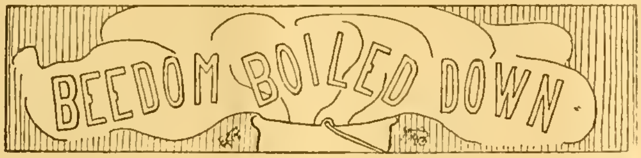
14. There are cures by the hundred, but likely you'll swell in spite of them. After you've been stung a good many times the stings will not swell much.

15. They probably went back to their own hive, or into some other hive in the apiary.

Trying to Prevent Swarming.

It was very cold and rainy here all the month of May, but my bees have filled their hives on willow and apple-bloom, and are very strong in numbers, so that I have put hives filled with old comb on top to keep them from swarming. I shall leave them on until raspberry blooms, then move the bottom hive to a new stand, keeping the queen in the bottom hive, giving frames of eggs to the upper hive on the old stand, and put on the super for comb honey. Do you think that will do, or would I better put the queen into the upper hive and let the bottom colony rear a queen? They will have all the brood and eggs. I do not use a honey-board, but I never have had the queen go into the upper hive. MASSACHUSETTS.

ANSWER.—Better leave the queen on the old stand with the story that has no brood, shaking off part of the bees from the brood before setting it on a new stand. But don't shake off more than half the frames, for all the field-bees will go back to the old stand anyhow.


BEEDOM BOILED DOWN.

Separators Necessary.—R. C. Aikin says weak colonies that build slowly must have separators or they will make combs bulged and uneven, as will strong colonies in a very weak flow.—Progressive Bee-Keeper.

Smoker Fuel.—Mix a little rotten wood with planer shavings, and your fire will hold better. Take a dead limb of a tree, bone-dry, break it into proper lengths, and four or five of these mixt with the shavings will make a smoke to bombard Dewey fashion.—Gleanings.

Viciousness in Bees may be a result of rough handling, and it may be because they are seldom visited. We got some bees from an apiary whose proprietor was practically never seen by the bees. At first they could only be approacht well veiled, but after a few weeks they were as gentle as the others. —Le Progres Apicole.

Sitting at Work, while in the apiary, is strongly defended by Mrs. Harrison, in Gleanings. Sitting, she takes things more leisurely, doesn't get nervous and stir up the bees, and so does not get into trouble with the neighbors. Some prefer standing, some sitting, but those who change their minds seem to go all one way—to the sitters.

A Load of Honey.—Loading a bee with honey adds to its weight a trifle more than one-half, according to some experiments made by Prof. C. P. Gillette, of the Colorado college. A pound of empty workers contains, on the average, about 5,500 bees.—Bee-Keepers' Review.—But is it not true that loads vary as the pasture varies?

Fastening Foundation in Sections.—Our American friends appear to think bee-keepers in England can know nothing of their foundation fastening machines, because we go in so much for split and grooved sections. Fact is, we can assure our cousins across the water that, with us, such machines have "been and gone." It is nearly 20 years since our starters were secured by machines of our own make, both by heat and by simple pressure, without heat, on both wood and glass. We afterwards found the split top-bar answers our purpose more satisfactorily; and later, the section split on three sides; while finally we divided the section entirely in two, placing a long sheet of foundation right across the three sections at one operation.—Bee-Chat, of England.

United States Bee-Keepers' Union.—The American Bee-Keeper quotes the reply of R. L. Taylor to the effect that its membership will be increast by making it the greatest possible good to its membership, and propounds the supplemental question: "How can the Union be made of any possible good to its members without an increast membership?"

Unqueening.—In Progressive Bee-Keeper, R. C. Aikin thinks unqueening is more labor than to allow swarming, but it allows the work to be more methodical, and better kept under control. He can unqueen 25 colonies in a day, or cut out cells from an equal number nine days after unqueening, besides doing the necessary work with supers, making a total of eight days' work for an apiary of 100 colonies, and he thinks he would have to spend as much time with swarms, besides being badly interrupted about super work.

Prof. Cook on Sweet Clover.—Prof. Cook says: "I gave, as the result of my own experience, the opinion that sweet clover, while a very excellent honey-plant, was of little worth for hay or pasturage....That it has great value for green manuring....there can be no question. There is no quicker method to restore lost fertility than to plow under a rich, vigorous clover crop, and surely melilot is just that....I am very glad that so many report *Melilotus alba*, or the white sweet clover, as furnishing appetizing food for cattle and horses."—Gleanings.

Facing Apples and Honey.—The replies in this paper from commission-men lead to the conclusion that they are a unit *against* facing. But according to an article in Gleanings, from W. S. Fultz, there are exceptions, the commission-men of Saint Paul practically obliging shippers to veneer. Mr. Fultz says:

"Last summer apples were so plentiful here that they went begging at 15 cents a bushel, and as I had over 400 bushels, I knew that I should have to find a market somewhere else, or my apples would go to loss. I sent a trial shipment by steamboat to St. Paul, and realized 47 cents per bushel net. During the summer I sent 120 barrels to St. Paul, and they averaged me $1.20 per barrel net. All of those apples were faced with the nicest, and the only trouble was that I could not supply the demand that I had for apples. When I was sending my Dutchess apples, one of my neighbors askt me to allow him to put five barrels of the same kind of apples with mine. This I would not do, but I allowed him to ship his when I shipt mine, making two consignments. When the returns came I had $1.20 net per barrel, and was askt to send more. My neighbor had 40 cents net per barrel, and was told that his apples did not sell well because they were not faced. His apples were just as nice as mine. I got well paid for all my labor and trouble, and he nearly gave his apples away, just because they were not faced.

Large vs. Small Entrances.—Instigated by Editor Root, Messrs. Doolittle and Miller have lockt horns with regard to the amount of entrance-room given under hives, and especially its relation to swarming. Dr. Miller says, in Gleanings, that years ago, following the lead of Adam Grimm, he shoved forward his super of wide frames, allowing an opening of ¼ to ½ inch at the rear end between the two stories. When he ceast the practice there was a notable increase in swarming.

Mr. Doolittle says that in the days of box-hives there was plenty of swarming when all hives were raised. To which Dr. Miller replies that there were abundant reasons for swarming in spite of large entrances, and he thinks box-hives thus raised were not so entirely given up to swarming as at the present day. Surplus room was not given then as now.

To the argument that when bees hang out in hot weather and then all go in when the hive is raised on four blocks, Mr. Doolittle says the only difference is that in the latter case the bees have plenty of room to loaf under the frames, and he'd just as soon they'd loaf outside. But Dr. Miller insists that it cannot be so warm with all four sides open as with only one. But he admits it isn't pleasant to have the hives open at the sides so the bees may sting one's ankles, and hives raised on blocks are a little unstable.

The editor occupies middle ground, wanting an opening front and rear, with some appearance of favoring the big entrance on all four sides.

AMERICAN
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

PUBLISHT WEEKLY BY
GEORGE W. YORK & COMPANY
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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

EXECUTIVE COMMITTEE—Pres., George W. York; Vice-Pres., W. Z. Hutchinson; Secretary, Dr. A. B. Mason, Station B, Toledo, Ohio.

BOARD OF DIRECTORS—E. R. Root; E. Whitcomb; E. T. Abbott; C. P. Dadant; W. Z. Hutchinson; Dr. C. C. Miller.

GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 38. JUNE 30, 1898. NO. 26.

EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Awful Rush for bee-supplies is about over for this year. It is strange that so many will wait until they really *need* the goods, and then send in their orders and expect them to be filled "by return mail." Then if the goods don't come as expected, some at once begin to berate the dealer, when perhaps he had several hundred orders in ahead, and may also be entirely out of goods on account of the factories not being able to supply them as fast as he and other dealers had ordered.

The way to do is to order enough goods early—say in March or April—so that should they even then be delayed there would be no doubt about their arriving in plenty time for use when needed. We gave this advice in these columns very early in the season, but it seems quite a number failed to heed it, and consequently suffered severe disappointment.

We have had experience enough in the bee-supply business to have genuine sympathy for the overcrowded and overworkt dealers when the grand rush for goods arrives. It is a terrible strain, and we wonder that many of them are not found in the insane asylums after an experience of a year or two.

◆

National Pure Food Law.—The Ohio Farmer, in a recent issue, referred thus to the Pure Food Bill which was introduced in Congress some time ago:

> We have lookt over the Pure Food Bill introduced in Congress—a modification of the original measure prepared by the recent pure food convention in Washington. It is lengthy, and relates largely to drugs. In so far as it will aid State pure food authorities to enforce their laws we commend it. Of course, it can only apply to interstate traffic. Adulterated goods sold in the State where made do not come under its jurisdiction.
>
> It organizes a section in the chemical division of the Department of Agriculture for analysis and investigation of samples of goods offered for sale anywhere in the United States. If any article under its jurisdiction is found to be adulterated, the Secretary of Agriculture informs the United States district attorney where the sale was made, and he must prosecute. As we understand it, such sales must be referred to the Department of Agriculture, or, in other words, are taken out from the State authorities' hands. If so, the Bill should be revised in this particular, as State laws should in no case be interfered with.
>
> Section 2 of the proposed law provides a fine of $200 for introducing any adulterated goods into any State from outside, and $300 for each subsequent offense, or imprisoment not to exceed one year, or both.
>
> Section 9 requires all manufacturers and dealers to furnish samples to any one authorized by the Secretary of Agriculture, with a fine of $10 to $100, or imprisonment, or both, for refusal.
>
> Another section provides for the confiscation and sale of adulterated goods carried from one State to another, the proceeds to be turned into the United States treasury. Other sections define what adulterations consist in, the fixing of standards, and providing for enforcement of the law.
>
> On the whole we think the Bill is a good one, and we trust that Congress will find time, amidst the war excitement, to pass it. It is as good as we can expect, with our present constitutional limits to the jurisdiction of the national government. We shall never be able to control the production and sale of adulterated goods until Congress has complete jurisdiction, or laws of all the States are uniform and uniformly enforced.

It will be remembered that Messrs. Secor and Abbott, of the United States Bee-Keepers' Union had a hand (or two) in the work done by the pure food congress last March in connection with the Bill referred to. We hope it will soon be past by Congress. We are glad to notice that the large and influential agricultural papers of the country are lending their influence in the right direction. We trust that more of them will fall into line in defense of a measure so closely in the interest of public health by way of honest preparation of food products.

◆

Drawn Foundation with Natural Bases.—It turned out last year, that in some cases the bees would not perform satisfactorily with drawn foundation having a flat base. The A. I. Root Co. now announce that they have completed machinery to turn out drawn foundation with natural base. They will make the cell-walls only about ⅛ inch deep, about twice the natural thickness, and the base as thin as the bees make the natural base. This will make it run about the same number of feet to the pound as the ordinary thin super foundation. As yet it is only made in pieces 3⅝x4 inches. A half-pound costs a dollar, postpaid. Here is what Editor Root has to say about this new natural-base deep-cell foundation, in Gleanings for June 15:

> Several have written of late, asking why we had nothing to say about drawn foundation. I will explain: It will be remembered that the dies that were made last season at so great an expense (nearly $1,000) turned out a product with *flat* bases. Our early experiments seemed to show that, when cells were deep, the bees would accept such a base as readily as the other. But the developments of the season went to show that the bees did not in all cases take kindly to it. In some instances, at least, they thickened the midrib in their effort to make concave cell-bottoms. While they did not do so in all cases, the fact that the bees did so at all in a few instances was sufficient reason to induce us to abandon the dies, as much as they cost, and go to work on a set that would produce *natural* bases.
>
> Mr. Weed thought the problem would be easily solved; but altho he has been working on it for nearly a year, meeting with repeated failure, he has only just succeeded in having a set made that makes drawn foundation with natural bases a success in every way—at least so far as the mechanical construction of it is concerned. In the mean time, while he was experimenting, we feared that he might not be able to perfect his dies, and it seemed wise to say nothing about the new product until we were *sure* of what we could do.
>
> I am now glad to report that the new dies are in opera-

tion, and making a superb drawn foundation with *natural bases.* This product differs from the old in two quite important respects. First, it has the natural bases already referred to, and, second, the cells are only ⅛ inch deep. I suppose we *could* make them deeper; but a few of our friends, fearing that deep walls will either give rise to the comb-honey canard, or else make thick cell-walls in comb honey, we refrain. With the cell-walls only ⅛ inch deep, it will run almost as many feet to the pound as the ordinary super foundation. It is nothing more nor less than a beautiful transparent foundation having bases as thin as the bees make them, with cell-walls about twice as thick as we find them in nature. Indeed, it looks very much like common foundation, except that the walls are nicely started for the bees, and the bases are much thinner.

Mr. Weed is very confident that they will not remodel the bases, nor will they stick in an accumulation of wax as they did do with the old flat-base drawn foundation. From the tests he has made in the hive, it appears the bees have a decided preference for it. Samples of ordinary foundation and the natural-base drawn foundation were placed side by side. The bees immediately accepted the one (deep-cell) and ignored the other; that is to say, I have myself seen the drawn-foundation piece thickly covered over with bees while the ordinary article had not a bee on it.

I make no predictions as to what the new product will accomplish; but I feel reasonably confident that it will give rise to no thick midrib in honey-comb as did the old-fashioned flat-bottom drawn foundation; and as the cell-walls are only ⅛ inch deep, there should be no occasion for fearing that it will give rise to canards about manufactured comb honey.

A moment ago I said the cell-walls of the new drawn foundation were twice as thick as we find them in nature. It would be possible to make them just as thin as the bees construct them; but Mr. Weed is satisfied that the bees will thin the *walls* when they will do little or nothing with the *bases*. The extensive experiments we have made in the past satisfy us that this is correct.

Universal testimony (with, perhaps, one or two exceptions) went to show that drawn foundation, imperfect as it was last season, was readily accepted by the bees; but owing to the fact that the base was flat, they did not seem to like it after they had further acquaintance with it; and in some cases, at least, comb honey was not completed from it any sooner, if as soon, as from common foundation. But now that we have given the bees the same article with a *natural base*, we expect different results. But if, however, the bees make from it a "gobby" article of comb honey, no one will be quicker to drop it than the Root Co. The fact that we abandoned the flat-base foundation last season because of this defect is pretty good evidence that we will do as we agree. But neither Mr. Weed nor ourselves would have put a lot more money into the new dies if we had not felt reasonably sure that the article we are *now* offering to the public would be free from the objections found against that which we put out last season.

We have received a sample of this new drawn foundation to experiment with, and it is beautiful indeed. We shall give it a trial, and hope to furnish a favorable report later on.

◆

Selling Extracted Honey.—In a recent issue of the Northwestern Agriculturist, Mr. Ernest E. Conner, of St. Croix Co., Wis., gives his experience as follows in working up a market for extracted honey:

> When I first began to extract honey I had to literally give it away. People told me it was half sugar, or that "strained honey" wasn't fit to eat. I then had to explain the difference between extracted and strained honey, and by following it up, by always putting the pure article before my customers, I have, to-day, a demand that always exceeds the supply, for my extracted as well as my comb honey.
>
> Every bee-keeper should make it a point to build up a permanent trade, whether it be private or wholesale.
>
> Put your honey up in an attractive manner so that it will be pleasing to the eye, and it is then half sold. Have some labels printed, and on each package, whether large or small, have your name and address and the kind of honey the package contains. Distribute small samples, so markt, among people who like honey, and are willing to pay for a first-class article.
>
> You may think this is throwing honey away, but you will make it up in the end by increast demand; at least I have found it so.
>
> If your honey is very fine, put your name on it and sell it. If it is dark and will grade second or third, put your name on it and sell it for just what it is, and make the price to match.
>
> There are plenty of people who will buy a cheap article if they know it is pure and clean.

As the time will very soon be at hand when bee-keepers will have honey to sell, we will be glad to have any of our readers who have been successful in retail marketing tell how they did it. It may help some one as you have been helpt by reading the methods of others. We all should be as willing to give out information as to receive it.

◆

"Profitable Bee-Keeping, with Hints to Beginners"—the nine articles by Mr. C. N. White, of England, will begin next week in the Bee Journal, as we have received the first two of the nine. See page 410 of this number for further information concerning these articles, and also the premium offers for getting new subscribers for the last six months of 1898.

We would like to have all our readers, if possible, get and send in the subscriptions of their neighbor bee-keepers. The way to get rid of slipshod, old-fogy bee-keepers is to place under them the jack-screw of good bee-literature and raise them up to the level of those who are striving to keep bees in the modern and proper way. By so doing all will be helpt.

Many of our subscribers have already sent in new subscribers on the offers made on page 410, but there is room for many more. Before Aug. 1 we hope to add 1,000 new subscribers to our list. It can be done if every one will do only half as well as some others have already done.

Send for free sample copies to work with, or send us the names of non-subscribers, and we will mail the sample copies to them.

THE WEEKLY BUDGET

Mr. Chesley Presswood, of Bradley Co., Tenn., wrote us June 18: "My bees are doing splendidly so far this year."

Mrs. Effie Brown, of Eau Claire Co., Wis., writing us June 12, said:

> "Bees here are unusually forward this year. I can take off some comb and begin extracting June 15."

Mr H. H. Page, of the Page & Lyon Mfg. Co., died May 23, aged 80 years. So reports Gleanings and also the Progressive Bee-Keeper. We have not learned any of the particulars, but understand that the firm will go right on in their large lumber business and as manufacturers of bee-keepers' supplies. Their advertisement appears regularly in these columns.

Mr. G. Stout, of Hennepin Co., Minn., sent us a picture showing a disk section-cleaner on the Golden plan, attacht to a grindstone axis. He says he has cleaned about 500 sections with the disk, and it is good for half as many more without renewing the sandpaper. Mr. Stout runs his grindstone with a treadle, so he can sit down and clean sections or grind the butcher-knife. Of course he's a very "Stout" man.

Mr. Edgar B. Whipple, of Hillsboro Co., N. H., wrote us as follows, June 20:

> "Friend York:—No. 23 of the 'Old Reliable' failed to reach me—the first copy I ever mist in all the years I have been a subscriber. Please send me No. 23, and oblige.
>
> "I have borne a great deal from the 'Old Reliable,' and never kickt. Gave up the old editor (Newman), and learned to love the new. Gave up with regret the neat, little booklike pages, and learned to look for the long wrapper and broad leaves. Endured the horrid spelling, and learned to like it.

Noticed the leaving off of the post-office address of all correspondents, and blamed not the editor, but our miserable competitive system that almost compels us to do all sorts of mean things we would never do under an up-to-date system.

"No. I have not kickt, and I don't now; but when you print as good an article as Mr. Cowan's, and I get it with the middle dropt out, I can't stand it.

"Please send me No. 23, current volume."

We are always glad to replace lost copies if notified in time, before the edition is all gone.

Dr. Miller, after being favored with a visit by Mr. and Mrs. Cowan, of England, sent this "straw" to Gleanings:

"I can sing 'God Save the Queen' more heartily than ever, after a visit from Mr. and Mrs. T. W. Cowan. They are delightful people, and, above all, they're *good*."

Right you are, Doctor. We wish that they could attend the next meeting of the United States Bee-Keepers' Union, where many of our bee-keepers could get acquainted with them. It would be well worth going a long way in order to meet them—among "the Queen's best."

Mr. R. C. Aikin, President of the Colorado State Bee-Keepers' Association, writing us June 20, said:

"My honey-flow is just starting, with everything apparently favorable. I will probably be exceedingly busy for the next few weeks."

Mr. Aikin appeared before the Western Classification Committee at its meeting in Manitou Springs, Colo., June 14, in the interest of the less than carload rates on bees by freight. As yet nothing is known about the result of their deliberations. But we hope to learn soon that the petition of the bee-keepers was granted.

Editor E. R. Root, in Gleanings for June 15, copies entire our editorial on "Shipping Comb Honey by Express," found on page 328 of the Bee Journal. He then followed it with this paragraph:

"It is almost unnecessary for us to state that our experience in handling comb honey leads us to endorse every word. Indeed, I should like to underscore every line of it in red ink if I could."

It is not often that an editorial in these columns receives such a "*red*-hot" endorsement as that, and from such an able source.

In a letter to us dated June 18, Mr. Root had this to say about the honey prospects in his locality in Medina Co., Ohio:

"There is no clover honey here of any consequence. Bees are being fed, altho the prospects from basswood is very good; but we may be disappointed in this also."

A Western Bee-Supply Firm, that had been written to in a joking manner, tho at the same time being urged to rush on a carload of goods at once—if not sooner—replied in the following manner—we omit, of course, all names:

"Dear Sir:—Referring to your communication we beg leave to advise that we promist we would ship the car on or before June 30. This is the very earliest that we could promise it.

"We certainly do not wish to see you go to the insane asylum for a good many years to come, altho we do not doubt but what you and all of the rest of us will ultimately land there, for of all the impatient, unreasonable people on the face of the earth, the bee-keepers are the worst—when swarming-time comes around.

"We will do our very best to get the car there as many days before the 30th as we possibly can, as we wish Mrs. —— to have her husband with her as long as possible.

"You say you have a mail full of kicks. That is nothing. Get hardened to it the same as we are. Before you have many more gray hairs on your head you will find that the bee-supply business is not all that it is crackt up to be."

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

FOR THE READERS OF THE AMERICAN BEE JOURNAL.

PROFITABLE BEE-KEEPING,

WITH

HINTS TO BEGINNERS.......

By Mr. C. N. White, of England,

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

Mr. White is owner of one of the largest apiaries in the country where he lives, and has made a life study of the subject. He is also lecturer, under the Technical Education Scheme, to several County Councils in England. He will treat the subject in a

Series of Nine Illustrated Articles:

1. General and Introductory.
2. Bees.
3. Handling Bees.
4. Swarming.
5. Hives.
6. Foundation.
7. Supering.
8. Diseases.
9. Wintering

This will be a series of practical articles that bee-keepers of the United States will not want to miss reading. They are copyrighted by Mr. White, and will appear only in the American Bee Journal, beginning in July.

We want our present readers to begin at once to get their neighbor bee-keepers to subscribe for the Bee Journal for the last six months of 1898, and thus read the articles by Mr. White. In order that all may be able to take advantage of this rare opportunity to learn from a successful and practical English authority on bee-keeping, we will send the American Bee Journal for

The balance of 1898 for only 40 cents—
To a NEW Subscriber—thus making it

SIX MONTHS FOR ONLY FORTY CENTS—

Which can be sent in stamps or silver. If you are a subscriber already, show the offer to your bee-keeping neighbors, or get their subscriptions, and we will give you, for your trouble, your choice of one of the following list, for each new 40-cent subscriber you send:

For Sending ONE New 40-cent Subscriber:

1 Wood Binder for a Year's Bee Journals
2 Queen-Clipping Device
3 Handbook of Health—Dr. Foote
4 Poultry for Market—Fan. Field
5 Turkeys for Market—Fan Field
6 Our Poultry Doctor—Fan Field
7 Capons and Caponizing—Field
8 Kendall's Horse-Book
9 Mullen's Horse Book
10 Foul Brood—by Dr. Howard
11 Silo and Silage—by Prof. Cook
12 Foul Brood Treatment—by Prof. Cheshire
13 Foul Brood—by A. R. Kohnke
14 Muth's Practical Hints to Bee-Keepers
15 20 "Honey as Food" Pamphlets
16 Rural Life

For Sending TWO New 40-cent Subscribers:

1 Potato Culture—by T. B. Terry
2 Green's Four Books
3 Ropp's Commercial Calculator
4 Dr. Tinker's Bee-Keeping for Profit
5 40 "Honey as Food" Pamphlets
6 Winter Problem in Bee-Keeping—by Pierce
7 Hutchinson's "Advanced Bee-Culture
8 Dr Brown's "Bee-Keeping for Beginners"
9 Bienen-Kultur—German
10 Bees and Honey—160 pages—by Newman
11 People's Atlas of the World

Please remember that all the above premiums are offered **only** to those who are now subscribers, and who will send in new ones. A new subscriber at 40 cents cannot also claim a premium; but we will begin the subscription just as soon as it is sent in, which will secure several June numbers in addition to the last 6 months of this year, provided the subscription is forwarded to us **at once.**

If you want your bee-keeping neighbors to be certain of getting all the numbers of the last 6 months of 1898, you had better get their subscriptions in **before July 1**, as we may run out of copies before the end of that month.

Now, let every one go to work, and help roll up the largest list of subscribers the old American Bee Journal ever had. It can easily be done if all who possibly can get a few new subscribers will kindly do so.

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

“A Queenly Deceiver.”

“He fools his customers by sending more than is expected.”—See page 105, current volume Bee Journal, and ask for the free pamphlet referred to. I am now prepared to fill orders promptly with FINE YELLOW-TO-THE-TIP QUEENS, or daughters of imported stock mated to golden drones, at 75c each. Purely-mated Queens reared from the best stock and by the best method known, is what I furnish, and will prove it to all who give me a chance. Money Order Office, Warrenton.

Address, **W. H. PRIDGEN.**
22Atf Creek, Warren County, N. C.
Please mention Bee Journal when writing.

Texas Queens

Best honey-gathering strain in America. Tested, $1.50. Untested, $1.00. Write for a Circular. **J. D. GIVENS, Lisbon, Tex.**
7A26t Please mention the Bee Journal.

BEE-KEEPERS' SUPPLIES! Largest and Best equipt Factory in the SOUTH-WEST.

Send for Catalog.
FRED A. DALTON,
1A26t WALKER, Vernon Co., Mo.

Queens, Bees and Bee-Keepers' Supplies

Tested Queens in April and May, $1.00. Untested, 75c. Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

F. A. CROWELL,
8Atf GRANGER, MINN.
Please mention Bee Journal when writing.

SEE THAT WINK!

WATCH POUDER'S AD

Bee-Supplies! ROOT'S GOODS at Root's Prices.
Ponder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Catalog free. Walter S. Pouder,
512 Mass. Ave.,
INDIANAPOLIS, INDIANA.
Please mention Bee Journal when writing.

QUEENS Italian stock. Untested, 70c each; 3 for $2.00 After July 1, 50 cents each; tested, $1.00 each. **Root's Goods at Root's Prices.** Prompt shipment and satisfaction guaranteed. Catalog free.
THEODORE BENDER,
20Atf **Canton, Ohio.**
Please mention Bee Journal when writing.

THE PLACE TO GET YOUR QUEENS

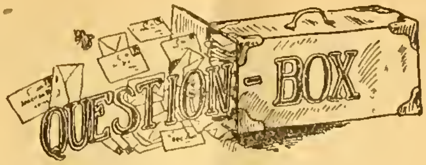
Is of H. G. QUIRIN, of Bellevue, Ohio.
Ten years' experience with the best of methods and breeders enables him to furnish the best of Queens—Golden Italian—Doolittle's strain—warranted purely mated, 75c each; 6 for $4. After June, 50c; 6 for $2 75. Leather Colored same price. Safe arrival. Will run 1,200 Nuclei, so there will be no waiting for your Queens. 23A16t
Please mention Bee Journal when writing.

Golden Italian Queens Cheap!

Two-frame Nucleus, with Queen, $2.25.
If you want **BEES FOR BUSINESS,** send for my Catalog of prices. . . . .
18Etf J F. MICHAEL, Greenville, Ohio.
Please mention Bee Journal when writing.

One Fare for the Round Trip

To Buffalo, N. Y., and return, account Baptist Young People's Union meeting, July 14-17. Rates lower than via other lines. For full information call on or address J. Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone 3389 Main. (30



In the multitude of counsellors there is safety.—Prov. 11-14.

The Progress of a Colony.

Query 74.—Suppose a colony has, on March 21, two frames of brood with bees enough to cover them

1. Given the best care as to protection, and in every way, and setting them over a strong colony so as to get the heat from that, how many frames of brood will there be bees enough to cover three weeks later?

2. How long after March 21 will it take to reach the queen's capacity, supposing that is 10 frames?—Illinois.

Mrs. L. Harrison—I don't know.

Emerson T. Abbott—I do not know.

J. A. Stone—1 and 2. I don't know.

J. M. Hambaugh—This is too knotty for me.

E. France—It would depend very much upon the weather.

Chas. Dadant & Son—Too much guesswork about that to reply knowingly.

Rev. M. Mahin—I could only guess, and my guess might be wide of the mark.

Eugene Secor—1. There ought to be bees enough to cover five frames. 2. Eight weeks.

Dr. C. C. Miller—1. I don't know. Perhaps two and a half. 2. May be two or three months.

Prof. A. J. Cook—So much depends upon queen, season, and other conditions that a positive answer is not possible.

R. C. Aikin—1. Two combs (full) of brood should hatch enough bees to cover all of five. 2. Five weeks. These answers approximate.

C. H. Dibbern—1. That depends upon many things, and cannot be answered with any certainty. 2. That would be about as uncertain as the first question.

S. T. Pettit—There are too many conditions to be considered in this problem to answer with anything more than a guess. Not knowing the age of the brood March 21 adds to the difficulty.

R. L. Taylor—1. On account of the dying off of the bees no more brood can be covered April 21 than March 21. 2. If everything is favorable, and the queen is excellent, three months and a half might answer.

Dr. J. P. H. Brown—1. About four frames. 2. “How long” will depend altogether upon the conditions of the weather. If these are favorable, I would say the “capacity” would be about the middle of May.

Dr. A. B. Mason—1. That will depend upon the locality. In this locality (Lucas Co., Ohio) a colony that hasn't bees enough to cover more than two combs of brood is a poor colony, and would breed very slowly.

J. A. Green—1. There could not be more bees than would hatch from the first two frames, added to the original number. As a large proportion of the latter would die, you could not count on

Sweet Clover

And Several Other Clover Seeds.

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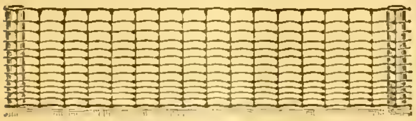

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says John Sherman—but men joke of war. To see you chase stock from crops may amuse others, but it's—well, no joke. We suggest **Page fence.**

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more bees than would cover three to five frames, depending upon the weather. 2. No definite answer can be given to this. It would depend very much upon circumstances. Somewhere between May 15 and June 30.

E. S. Lovesy—1 and 2. This would depend upon conditions, such as location, weather, honey-flow, etc. Here in Utah we do not experiment with the bees in March, only to see that they have sufficient stores.

W. G. Larrabee—I have never experimented on this, but should say a colony with two good frames of brood March 21 would make a good colony by June 10, or the beginning of the honey-flow in this locality (Vermont).

Mrs. J. M. Null—I have no experience in placing over a strong colony to secure heat, and by using a division-board without this extra precaution, the queen's capacity may be reacht by the last of May or first of June.

O. O. Poppleton—1 and 2. No definite answer can be given to these questions. Seasons vary too much as regards weather and honey-flow. Some years such a colony would build up in half the time it would other seasons.

G. M. Doolittle—It depends upon the season and size of frame. As a rule, such "fussing" does not pay the practical apiarist. Some seasons bees build up rapidly. Often it is June 15 in this locality before there are 10 frames having brood in them in any hive.

D. W. Heise—1. In the absence of more data as to the amount of comb space occupied with larvæ and eggs in addition to the brood mentioned, my guess would be about double the number. 2. All depends on circumstances.

J. E. Pond—1 and 2. The above questions are of such a nature that no intelligent answer can be given. It is something like asking, "How big is a piece of chalk?" No data is given as to locality and general climatic conditions, consequently "I pass."

G. W. Demaree—O, my friend, there are too many "ifs" about your questions. How about the weather? How about the honey and pollen resources? Such a nucleus as you describe, in my climate (Kentucky), usually would get ready for the white clover harvest in about eight weeks from March 21.

P. H. Elwood—This is too deep a question for me. It will depend upon the weather, the amount of stores in the hive, etc. Here (New York) there was not a large increase of brood during the three weeks following March 21. That amount of maturing brood May 21 would usually be followed in three weeks by a hive full.

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has authorized its agents to sell excursion tickets July 2, 3, 4, good returning July 5, within a radius of 200 miles from starting point, at one fare for the round trip, account of Fourth of July. City ticket office, 111 Adams St. Van Buren St. Passenger Station, Chicago. Telephone Main 3389. (38-26-1)

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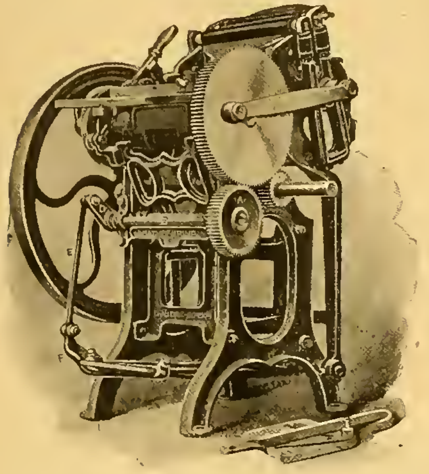

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GENERAL ITEMS

Clover Contains No Nectar.

We had a heavy rain last night and it still continues. Bees have barely made a living so far. I noticed a large colony yesterday that was starving, and I fed them immediately.

The heads of white clover are large and quite plentiful, but contain no nectar. I seldom see a bee at work upon it. Yellow sweet clover is blooming nicely, but does not attract the bees, and the white variety is just beginning to open. Basswood is full of buds, and will soon be in bloom. MRS. L. HARRISON.

Peoria Co., Ill., June 23.

Catclaw their Hope.

We have had fine rains lately, and are hoping for a crop of honey from the second flowering of the catclaw in July. Our spring crop from "guajilla" was nearly a failure, owing to atmospheric conditions, so we will be doubly pleased to reap a harvest next month.

CLAUDE STERT.

Uvalde Co., Texas, June 15.

Outlook Not Encouraging.

White clover is a failure here this year. I have just moved the home apiary out in the country, where they are now revelling in Alsike "up to their eyes." The "tent-caterpillars" or "army worms" have also stript every leaf from the basswood in this vicinity, so that the outlook is not very encouraging.

JOHN ATKINSON.

Crow Wing Co., Minn., June 21.

Too Rainy and Cold.

'Tis rather a hard season for bees; too much rain and cold weather. The fields are white with white clover blossoms, but the bees can do nothing on them. The season will close in 10 days, as the farmers have commenced to cut the grass. HENRY ALLEY.

Essex Co., Mass., June 21.

Starving—What Ailed the Bees?

On account of so much cold rain here this spring the bees got but very little good of the fruit-bloom. In this locality the bees, as far as I can learn, are almost in a starving condition, and there has been but very little swarming here so far this season. Out of 26 colonies I have had only two swarms, and they were put on empty combs. I have been feeding for the last two weeks. The sweet clover is beginning to put out, but this is the off year for it, and we won't have a very heavy crop. The white clover is not what we expected it would be after so much rain.

Now I'm going to tell what happened here this spring in a neighbor's apiary of some 40 colonies. They acted about the same as bees with the dysentery, with the exception that they came out and died outside of their hives. Probably this was owing to the warm weather so they could get out. When they would come out they would be bloated or swollen so that they were almost twice their usual size. They were purged,

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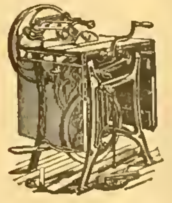

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and their discharges were yellow, just like the dandelion bloom, but there was no bad smell about or in their hives. They would come out of the hives and tumble and roll over the ground and die by the thousands, until there were scarcely enough bees left in the hives to take care of what little brood they had. There were three or four colonies that died outright.

This circumstance occurred during the time the dandelion was in bloom, and I thought that the dandelion was probably the cause of the trouble, as the discharges were so yellow, but if that was the cause, why did it not affect other bees in the same vicinity? These bees were the only ones that had the disease. Some thought they were poisoned, and that theory would hardly hold out, for other bees would be apt to get the same thing.

I have handled bees for over 40 years, and I have never seen or heard of such a thing before. Now, we should like to hear through the "Old Reliable," the opinions of some of our best and most practical bee-keepers in regard to what I have written about our neighbor's bees. He would also like to hear, as he is quite an apiarist. We would like to hear from Dr. Miller and others. J. S. SLEETH.

Livingston Co., Ill., June 18.

◆

"The Goose Hangs High."

My bees are in fine condition. I did not lose any last winter. They were on the summer stands, and came through in fine condition. I had my first swarm May 24. I was not looking for them to swarm, so they got the start of me while I was away from home. They left for parts unknown to me. I soon put a stop to such nonsense. They are full in the supers now, and I shall extract this week. I am waiting for it to cure. Everything is lovely, and "the goose hangs high," as the old saying goes.

S. T. CRANDALL.

Washington Co., Wis., June 22.

◆

Season a Failure.

The honey season here is a failure. Clover is over, linden is passing, and yet the combs are dry. JACOB TATE.

Miami Co., Ind., June 20.

◆

Bees Doing Well.

Bees are doing well. Horse-mint is in full bloom. I have taken 30 pounds per colony already. J. C. BEAVER.

Dallas Co., Tex., June 20.

◆

An Unfortunate Bee-Keeper.

While nailing shingles on an out-building the scaffolding fell when we were putting on the last course of shingles, and I fell to the ground, head foremost, and unjointed both hands and broke both arms just above the wrists, and stove the left shoulder up quite badly, and I had to be helpt like an infant for a long time, being unable to write or help myself. I am old and my hands are both stiff. My object was to sit under my own vine and shade-tree in my old days and see a few nice Italian bees work, as it greatly delights me.

While I was lying on my sick bed I would use the splints that my broken bones were bound up in, and turn the pages of the Bee Journal and read it in preference to any paper we take. And, O, how I would like to shake the hand

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of a certain class of men that are writing for the American Bee Journal. Some of these men are the great head-lights, and are building for themselves a monument perhaps more lasting than granite. I keep a scrap-book and when I see articles by certain men into the book they go—except one man. We can't spare paper enough to put down all he says. He must be the most patient man of his day. [This last man must be Dr. Miller.—EDITOR.]

W. J. MORRISON.

Dade Co., Mo., June 15.

Prospects Never Better.

Bees are doing fine in this locality. Prospects for a honey crop never were better. I have 80 colonies hard at work. I run expressly for comb honey.

FRANK COLE.

Mecosta Co., Mich., June 15.

Doing but Little Good.

Bees are doing but little good here on account of the wet weather this summer.

S. B. DAY.

Richardson Co., Nebr., June 18.

Paper Bags for Extracted Honey.

I have used paper bags like I enclose for putting up extracted honey for the last four months for customers that will take honey if I have anything to put it in. I have had syrup in one for six months, and it has not leakt a drop yet. Fill these bags with honey, and tie a string around the top and see how much hard usage you can give them before they leak. Let me know what you think of the idea. I sent a few to a bee-supply firm, and they say they are quite interested in them, and believe it to be a good idea. I would like to hear from you. The bags certainly are not expensive. A New York firm is trying to secure a United States patent for me.

Quebec, Canada. T. R. WOODARD.

[We were quite pleased with the two sample bags sent us by Mr. Woodard. They seem to be made of stout paraffined paper. We think they would be just the thing to be filled with liquid honey, and then let it granulate, and sell it in that form. We do not know the price of the little paper bags, but we should think they would be quite cheap. They could be made to hold from half a pound up to any size desired. We should like to try a few of the "baglets," to see how they would go in our local market.—EDITOR.]

Bees Not Doing Much.

Bees do not seem to be doing much at present. The white clover doesn't seem to have any honey in it. I took a stroll over a quarter-section to-day, and did not see or hear a bee. We have had a good deal of rain of late, and I thought when it cleared up the nectar would come in it, but we have had several days of fair weather, but it does not seem to come.

J. C. ARMSTRONG.

Marshall Co., Iowa, June 20.

Fourth of July Excursion

over Nickel Plate Road, at one fare for the round trip, between points on that line within a radius of 200 miles from starting point. All particulars furnisht at 111 Adams St., Chicago. Van Buren St. Passenger Station, on the loop. Telephone Main 3389. (36-26-1)

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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, June 18.—Not any new honey here, and the old stock is about exhausted. Market values about as last quoted for what little is being done. R. A. BURNETT & CO.

Kansas City, June 21.—We have several shipments of new comb honey from Florida, the first to our market this season. The demand is fair at 11 to 12c. The demand for extracted will be light until September.

C. C. CLEMONS & CO.

New York, June 20.—Comb honey: We closed out all of our old crop some time ago. We have received several lots of new crop from the South, good. No. 1 white, which sells readily at 11c per pound.

Extracted: Receipts of new crop from the South are large. We quote: Common, 48 to 50c a gallon; good, 52 to 55c a gallon; choice, 5 to 5½c pound. Demand is good, especially for the better grades Beeswax remains firm at 28 to 29c. HILDRETH BROS. & SEGELKEN.

Cincinnati, June 9.—Demand is slow for all kinds of honey, especially comb. Prices for best white comb honey, 10 to 13 cents. Extracted honey brings 3½ to 6c. according to quality. Beeswax in good demand at 25 to 28c for good to choice yellow.

CHAS. F. MUTH & SON.

Boston, June 9.—Fancy white in cartons, 13c.; A No. 1 white in glass-front cases, 11 to 12c.; No. 1, 10 to 11c; No. 2, 8 to 9c. Extracted, white, 6 to 7c; light amber, 5 to 6c. Beeswax, pure, in good demand with very light supply, 30c.

At the present time the demand for both comb and extracted honey is very light with but little stock on hand.

BLAKE, SCOTT & LEE.

Cleveland, June 9.—Fancy white, 12 to 12½c.; No. 1, 11c.; No. 1 amber, 9 to 10c.; buckwheat, 8c. Extracted, white, 6c.; amber, 4 to 5c. A. B. WILLIAMS & CO.

San Francisco, June 8.—White comb, 8½ to 10c; amber, 6½ to 7½c. Extracted, white, 5½@6c.; light amber, 4¾ to 5¼c. Beeswax, 23@25c

Not much now coming forward from any quarter. Supplies will doubtless be light throughout the season, admitting of little other than small local trade. Former quotations remain in force, with tendency on best qualities to higher figures.

Detroit, June 9.—Fancy white honey is lower and now quoted at 11c. No. 1, 9@10c; fancy dark, 7@8c; No. 1 dark, 6@7c. Extracted, white, 5@6c; dark, 4@5c. Beeswax 27@28c.

There are no changes in quotations, and very little desirable honey left. Sales are so slow that it is difficult to quote. The poor lots are being pusht at what they will bring.

M. H. HUNT.

Minneapolis, June 9—Honey much more encouraging. Fancy white clover comb is selling here now at 10½@11½c. Not advisable to ship darker than amber. Extracted fancy white clover, 5½@6c; amber, 5c; dark, 4@4½c.

Outlook for honey much more encouraging.

S. H. HALL & CO.

Indianapolis, June 9.—Fancy white 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand. WALTER S. POUDER.

Milwaukee, June 9.—Fancy 1-pound sections, 11@12c; A No. 1, 10@11 cents; No. 1 8@10c; amber, 8@8½c; dark, 7@7½c. White extracted in barrels and kegs, 5½@6c; amber, 5@5½c. Beeswax, 26@28c.

The demand for honey continues very good indeed, and values fairly sustained. While the best grades are most salable, the inferior grades meet attention, and the movements are quite satisfactory. A. V. BISHOP & CO.

Buffalo, June 9.—There is a very good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

St. Louis, June 10.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

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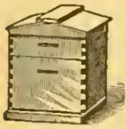

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38th Year. CHICAGO, ILL., JULY 7, 1898. No. 27.

CONTRIBUTED ARTICLES

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PROFITABLE BEE-KEEPING.

WITH

HINTS TO BEGINNERS,

BY

C. N. WHITE, OF ENGLAND.

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

No. 1.—INTRODUCTORY.

No one who has given the subject of bee-culture, or the relationship of bees to flowers, the least consideration will deny that bees play a most important part in the economy of nature, and it is not too much to say that without bees our fruit and seed supply would, to say the least, be extremely limited. Bees are as necessary to flowers as flowers are to bees. The flowers by their beauty and the delicate perfume they give off. attract the busy bee to the nectaries from which they extract the honey there secreted; but while busy upon this work they at the same time become dusted with pollen-grains releast by the anthers when in a state of ripeness. This pollen, or fertilizing dust of the flower must be carried from the male to the female flower, or to the stigmata. the female organs of the flower of the same species, otherwise fructification cannot take place, and fruit and seed would be impossible. This is frequently noticed to be the case when, owing to continual bad weather during the time that fruit-trees, for instance, are in bloom. the flowers are not fertilized, and consequently there is a failure of the crop. The important work of fertilization is thus unconsciously being carried on by the busy bee, while it robs the nectaries of their sweet secretion. The peculiar formation of the flowers in many instances proves that the bee. or other insect, is intended to be the agent in the fertilization of bloom.

Cross-fertilization is also evidently intended, for those flowers upon which both the anthers and stigmata are found are not both at the same period in a state to effect fertilization; that is to say, when the anthers of a flower. also bearing stamens. are scattering their pollen, the stigmata are not in a condition to receive it; hence, it must be carried to. and used by, that or those flowers on which the stigmata are in a receptive condition. Thus cross-fertilization is effected, and vigor transmitted instead of feebleness—the usual result of self-fertilization. From this point of view alone it is most desirable that bee-culture on modern principles should be taken up more generally in rural districts.

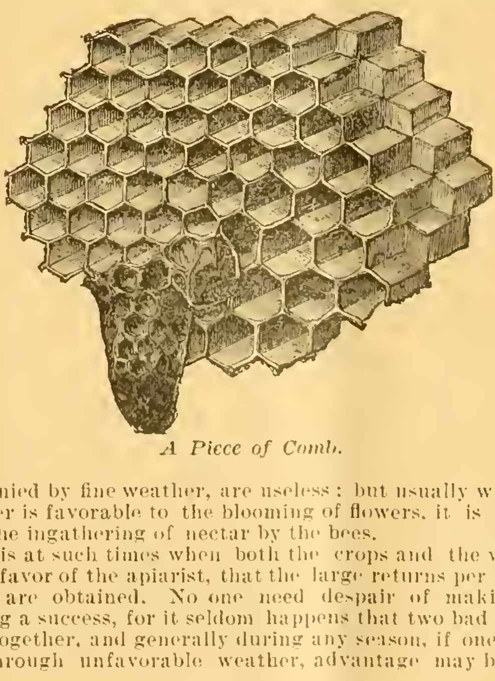
BEE-KEEPING PAYS.

Then, again, the direct pecuniary result of careful and systematic management is so encouraging that it is surprising apiaries are not met with on every farm and in every cottage garden. The number of colonies kept would of course be determined by the interest taken in the work and by the extent of bee-pasturage in the immediate neighborhood, but certainly a few hives might be stood in almost every garden if only as a source of interest and a means of providing a valuable and pleasant food.

For many years the effects of agricultural depression have been felt throughout the country: at the same time prices of agricultural produce have fallen until it is difficult, sometimes impossible, to make both ends meet. Various means have been suggested by those interested in the prosperity of agriculture, the oldest of our national industries, to minimize the effects of the general downward tendency—for instance, improved systems of dairying; more extensive and better management of poultry; fruit-culture; and the manufacture of jam. But important and valuable tho such occupations may become as a means adopted to add to the profitableness of farming, there is a most interesting, intellectual, and at the same time exceedingly profitable. rural occupation—*bee-keeping*—which, if properly, that is, intelligently, pursued would prove of great value to the agriculturist.

The extension of bee-culture as a means of adding to the income has been rapidly going on since it was demonstrated that bees could be managed without discomfort to the operator, and that a profit of 50 per cent.. 100 per cent., and even more was easily procurable.

Some countries or districts are well known for the extent of the honey-producing crops grown. Flowers alone. unaccompanied by fine weather, are useless; but usually when the weather is favorable to the blooming of flowers. it is equally so to the ingathering of nectar by the bees.



A Piece of Comb.

It is at such times when both the crops and the weather are in favor of the apiarist, that the large returns per hive recorded are obtained. No one need despair of making bee-keeping a success, for it seldom happens that two bad seasons come together, and generally during any season, if one crop is mist through unfavorable weather, advantage may be taken of another that succeeds it: but then it is only the intelligent bee-keeper who, like the successful man of business, having laid his plans works them out and receives the due reward of forethought and energy.

ONE SEASON'S WORK.

It may reasonably be askt: "What will an ordinary colony of bees gather in one season?"

"Bees do nothing invariably" is a trite saying. It is not only in what may be termed poor honey-producing districts that the returns are the worst, for I call to mind a parish where one bee-keeper took over 100 pounds per hive, another over 90 pounds, and another not 10 pounds per hive, tho all were working on the same system. The difference was undoubtedly due to forethought and energy in the first two cases, and lack of these desirable qualities in the third.

The best example of continued success I know of is that afforded by Mr. A. Abraham in the management of his three colonies. He is a farmer's son, and attends to his bees in the odd hours he can get after the ordinary work on the farm is over.

In 1892 he took 120, 105, and 103 pounds of honey, or an average of 109 pounds per hive: in 1893, 175, 167, and 126 pounds, average 156 pounds; in 1894, 205, 203, and 156 pounds, average 188 pounds: and in 1895, 185, 180, and 154 pounds, average 173. These three colonies have yielded honey that has produced on an average £3. 10s. per hive for the past four years.

A farmer living at Downham, near Ely, commenced bee-keeping with one fully equipt colony, in the spring of 1894, after attending a course of lectures in his village. At the end of the first season his balance sheet showed an expenditure of 42s. 6d., and income by the sale of honey of 101s. 5d., a profit of over 120 per cent. This year's return was better still. In many parts of the country, this year, the return of over 100 pounds per hive is by no means uncommon. One bee-keeper in Cambridgeshire, with 26 hives, took an average of 75 pounds per hive.

These are a few examples that might be multiplied, but they are sufficient to show that if situated in a good district and favored with genial weather, the bee-keeper must be to blame if, carrying out a few simple rules, he does not make bee-keeping a profitable undertaking.

CONTENTS OF THE HIVE.

In addition to the bees an examination of any hive of bees will reveal the presence of combs, composed of wax and containing honey and pollen. There will also be found, very frequently in undesirable quantities, propolis—a product valuable to the bees, but a nuisance to the bee-keeper.

The combs are made from wax, secreted in the body of the bee, from honey or syrup it has consumed. They consist of cells not quite half an inch in depth on each side of a mid-rib. The cells are built horizontally, and from the mouths of those on one side to the mouths of those on the opposite side of the mid-rib, measure ⅞ inch. The distance from the mid-rib of the comb to that of the next is 1½ inches barely; therefore, the space between the faces of the combs is about ½ inch. The great majority of the horizontal cells are, or ought to be, worker size, measuring across the mouths of the cells 5 to the inch; but upon the bottom edges of the combs, and often in larger quantities as the result of bad management, there are found larger horizontal cells measuring 4 to the inch. These are drone-cells.

There is still another kind of cell, acorn-shaped, built upon the bottom edges of the combs, and sometimes on the face of the combs among the worker-cells, termed queen-cells, but they are only built when the hive is becoming too crowded with bees, and they decide to send out a portion of the colony—a swarm—to found another colony. The building of combs not only represents the loss of much energy by the bees, but it also means the loss of a large quantity of honey and much valuable time.

Various calculations have been made as to the amount of honey the bees consume in order to secrete one pound of wax, some putting it as high as 20, and others as low as 10 pounds. But whatever the bees really use it is an amount we cannot, with a view to profit, afford to lose. At the same time, by preventing the bees building their combs from the wax they secrete, we have their energies for several days directed to the gathering and storing of honey, when they would otherwise be comb-building. The immense importance of this saving of time will be rightly understood when we consider that it may make a difference of 20, 30, or more pounds of honey in favor of the bee-keeper. It was recorded in the British Bee Journal in 1888, that one colony gathered 40 pounds in less than three days, and another 58 pounds in six days. The late Rev. G. Raynor stated, in 1889, that on June 15 his best hive gained 9 pounds in weight.

In the cells of the combs the bees store their two kinds of food—honey and pollen. Honey is the carbonaceous heat-giving and fat-forming food, and alone forms the food of the bees in winter, but at other times it is used by the bees in conjunction with pollen, the nitrogenous or muscle-forming food, as a perfect food for themselves when working, and for the rearing of grubs. The two foods together form a food without which brood-rearing is impossible; hence, the advisability of giving a supply of artificial pollen when the supply from natural sources fails.

The best substitute is pea-flour, which may be scattered on shavings in a straw-skep or box. The bees must be enticed to it by a little honey; then, when they have once found it, they will not cease to carry it into the hive until they can obtain the genuine article from flowers. Honey is also one of the choicest foods for man, and not the least valuable, as it is the only food that, having undergone chemical change in the body of the bee, can be taken directly into the system and used as a force-producer without having to pass through the ordinary digestive process. Certain flowers produce pollen in great profusion, and then it often happens that there is a superabundance stored in the combs. In movable-comb hives this is not a serious disadvantage unless all the hives are in a similar condition. If there are only a few hives in which the combs are overloaded with pollen, some such combs may be given to other colonies requiring a more liberal supply of this kind of food.

Propolis is a resinous substance found oozing from the trunks of certain trees, and is gathered by the bees for the purpose of filling up cracks and crevices, as well as covering intruders, such as snails, that enter the hive and cannot be removed. To the bee-keeper propolis is a great annoyance, as it makes such a sticky mess of the fingers and other things toucht during manipulations. Some bees gather more propolis than others: therefore, those who aim at perpetuating any particular strain of bees should endeavor in the breeding to eliminate this and other undesirable traits.

[Continued next week.]

⁂

Loaded Bees in the Sections, Etc.

BY J. A. GOLDEN.

In the February Review, I said Mr. Doolittle and others have told how the field-bees give the honey to the nurse-bees, and the latter store it in the cells. My bees, as a rule, do not follow that practice. I know this to be true, as I have spent a great deal of time sprinkling bees with flour and then watching them through the glass as they pass up and deposit their loads of nectar in the sections.

Now, in calling attention to my observation as to the above statement, I did not wish to be understood that field-bees did not transmit their load of nectar to other bees on return as well, but to show that bees also deposited direct in the cells.

Having read Mr. Doolittle's article on page 321, I doubt not he has reference to my article, having overlookt how I was convinced. He says: "Mr. Golden, I believe, claims that he knows that they do this; but if he has told us why, or how he knows it, I have failed to see the place." But as Mr. Doolittle seems to intimate in his concluding paragraph that if E. Gallup and himself are right, all other observations are nothing but fallacious, and if deceptive, it would be well to know it.

Now, for the benefit of the readers of the American Bee Journal I will here give my observations more fully, and I want it distinctly understood that my evidence for believing as previously stated, is seeing, which is in itself believing. Therefore, it has been a fixt rule (with me) in the study of bees and their manipulation, to make careful and painstaking observations upon every subject relating to them, their habits and their work coming under my observation, and thus I have found much convincing evidence that greatly conflicts with others upon the same subject, work or habits of the honey-bee, regarding which they have been equally vigilant in their observations. Now, this being true, it does not prove, to my mind at least, that one observer has given facts and the other falsity.

In regard to the question of where and how field-bees deposit their load of nectar on returning from the field, I had learned long before reading Mr. Doolittle's observation, by the aid of two observatory hives, and at a time when bees were working in the height of the flow. My plan was this: When bees were dropping by the hundreds upon the alighting-board, I would sift flour over them, see them pass in, then carefully lift the frame and would find floured bees passing here and there. Keeping a close watch, I would see one enter a cell, deposit her load, then withdraw therefrom, brush herself, and fly from the comb in search of another load. Others, as I also observed, would pass here and there over the combs seeming somewhat bothered. I supposed from this that they were depositing their day's gathering in some other comb, and were hunting for it. But other bees could be seen giving up to those which we designate as house or nurse bees.

Continuing my observation, I fitted up supers, glassing the sides, thus showing the sections, and continuing the dusting process, I found the same convincing evidence, that the markt bees were seen depositing nectar in the section-combs. Thus, I was theoretically led to devise the side-entrance from the bottom of the hive, intersecting the same in supers, keeping the entire force of the colony together during the season, as per my method previously given in the bee-papers. I greatly enjoy this manipulating, and not only so, but, as I have previously stated, it has been the means by which I was enabled to satisfy every claim, financially, that stood against me, both just and unjust, from the fact that it reduced the expenses for hives, frames, comb foundation, and other expenses in wintering, etc., besides giving greater yields, nearly doubling in comb honey the amount by that of the increase method. Now, please remember, I am speaking only for my locality.

In regard to the entrances that Mr. Doolittle speaks of, I know nothing about that, but I do remember the kind of entrance my father gave for his bees, over 50 years ago. It was so large that one day in wheat harvest an old neighbor who, having imbibed the contents of an old, long-neck wine-bottle, came for some honey. No one was at home but mother and myself, and as no honey had been taken, mother could not fill his order, so the old man swore he must have some honey, and staggered out to the apiary of a hundred colonies. Selecting one of the largest hives, he laid down and rolled himself under the hive, thrusting his hand and arm up into the hive, drawing down a great bunch of comb and bees, and, as mother and I rusht to the rescue of the old man, we were badly stung, but not in comparison to the old man, who did not appreciate eating his honey after getting it, but was taken home and a physician called. But in three months the old man died. So you see large entrances were used in those days, and my father used to say that bees would not swarm so much when no bottoms were used; and many times the combs were built clear down to the ground from those great big hives, and whether hereditary or not, I surely advocate a large entrance.

As to the side passage-way, as I use in my method, it is as eagerly accepted and used by the bees as a pedestrian with a crate of honey on his shoulder would seek the unobstructed sidewalk in Chicago to avoid delay.

Morgan Co., Ohio.

*

Home Marketing of Honey—An Experience.

BY F. L. THOMPSON.

Three years ago I tried to get up a home market for extracted honey by soliciting from house to house. In this way I sold from perhaps 700 to 1,000 pounds—I have forgotten the exact amount. I concluded, however, that it did not pay. By intense application I could make good daily wages, but that was all. The work was not at all what I was fitted for, and the perpetual feeling of being a round bolt in a square hole was wearing, to say the least, without mentioning the time thus wasted for a mere pittance (the difference between the wholesale and retail price, with the expenses of retailing) which might have been far more profitably employed, mentally, if not financially. At that time my plan was simply to show people the honey, letting them taste if they wanted to (but very few did).

The past winter I concluded to try it again, on a somewhat different plan. I had read of the wonderful success attending the plan of giving away samples, together with honey leaflets. I accordingly provided myself with a number of these leaflets, and printed some of my own, giving the gist of the matter in a very few words, so that it could be read through in half a minute or so. I gave away samples of my honey (a good quality), pouring it out of a nice, little majolica pitcher, holding about a quart and a half; and also at the same time samples of granulated honey, wrapt in little squares of parchment paper. In this way I called at about 500 houses, distributing my leaflets and circulars at each place.

Quite a number, perhaps 5 to 10 per cent., refused to take the samples at all. Perhaps about half of those that did take samples would take a quarter's worth of honey when I made my second call. Some took 10 cents' worth, and a few 5 cents' worth. A very few took a dollar's worth. I sold in all about 500 pounds. Not more than about one-third of those who had bought the first time did so again, when I made my third call. At many places I had to make three, four and five calls—they "hadn't the money" just then, or "had company," or something. I had learned by my former experience that when any one said "not to day," he or she (generally she) meant "not at all." Sometimes they would say, "Perhaps some other time." I made second calls at such places, but might have spared myself the trouble. Almost invariably it turned out that the above formula had been a mere evasion.

In giving away the samples, I took occasion to remark that the granulated sample was a proof of purity; that many would buy extracted honey if they thought they could get it pure; that I was a bee-keeper trying to get enough customers to take all my own honey; that the circulars told just why honey was a healthier food than sugar, and contained a number of recipes for cooking with honey; and more talk, if the opportunity afforded. I was generally well treated, perhaps more civilly than when I did not give away samples. But I met all the mean people I wanted to see, and a few more.

It will be seen that the sample-and-circular plan was not even as successful as my former one, which was poor enough. I do not know why that was; but I want to offer both these experiences as a solemn example to those who are enchanted by the siren voices of those who sing that the home market of the individual is the remedy for all ills. I have proved by two actual, prolonged trials that, for me, it is not; hence, it is reasonable to infer that the experience of some others may be like mine.

Of course, explanations may be given for my want of success. I know one or two who have had good success in selling honey from house to house. I think the appearance of their rigs and outfits "gave them away" as coming from the country. Result, confidence. Unfortunately, I couldn't fall back on that. When I put on poor clothes, or rather when I don't put on good ones, people take me—not for a farmer—but for a "sheeny" of the rag-buying or tin-peddling variety. My conscience wouldn't let me hire a female in a calico dress to sit in the wagon and personate the "old woman," and I couldn't afford a horse and wagon anyhow, just for that. Then, as intimated, I am a poor hand at the work. I can't think of the right thing to say, or the right words to express what thoughts I do have, until the opportunity has past.

Another bee-keeping friend sells a great deal of honey—always 10 pounds at a time—through his friends. When I started out in the work, he thought of course I could sell 10 or 15 buckets a day. I venture to say that if he had tried my plan, he would not have sold much more than I; while I can't try his because I haven't a wide circle of acquaintances, nor any who are apt to take orders from others for me. So it goes.

In every case, if instances of success in selling honey were analyzed, I believe it would be found that those who advocate the *general* plan of home marketing fail to take account of peculiar favoring circumstances in their own case. A man with a wide circle of acquaintances, in a thickly settled rural district, where he has lived 15 or 20 years, sells all his extracted honey without any trouble. He thinks, of course, anybody can do likewise. What nonsense!

Another, having all the peculiar qualifications of a salesman, has the luck to live not far from several unsophisticated rural towns, the inhabitants of which hang on his honied words, and tumble over each other in their efforts to contribute boodle to him. He writes an article telling of his fabulous successes. Very naturally; I would, too, in his place. Only, his experience is not representative. I fear mine is, to some extent—on the principle that fools are commoner than geniuses.

Some other results of my experience run counter to accepted ideas; especially the idea, that once get a person to taste *good* honey, and you have a customer. The saying that if a person once buys *good* honey, he will keep on buying, was also knockt into flinders. Now, I have a theory to account for the latter fact. The stomach craves just so much of each class of foods. More than that, it does not care for, except occasionally, as a tidbit or luxury for the palate. Now, usually, when people buy honey, and eat it, they eat just as much sugar and fruits, and so forth, as they ever did; consequently they don't feel the need of any *stomach room* for the honey. See?

Again, it would astonish the advocates of home individual marketing to ascertain how many people there are who don't like honey. Yes, I mean what I say. They *don't like it.* Does that sound heretical? It is so, tho. I can appreciate this attitude, because I am one of that class myself. After eating honey for years, under all circumstances, I am forced to the conclusion that I don't like honey, and never will. Nevertheless, I shall keep on eating it, for the considerations in Prof. Cook's article on honey as food, a year ago, affect me powerfully. But it goes without saying that the vast majority of those who don't like a thing, won't have it, and that settles it.

And yet, in spite of my poor success, I am of the opinion that all those who would like honey well enough to buy it continuously, if it was brought to their notice, are numerous enough to take all our honey at a good price. My point is, that they are *not* numerous enough to make the attempt of the *average* bee-keeper, and *average* salesman, to reach them, a paying job.

I think that those who advocate home marketing in general terms without qualification, are making a mistake. They are advocating something that it will not pay the average man to undertake.

All the foregoing is an argument for organization, as the one thing left. I need not enlarge on the familiar topic. But two thoughts occur to me that I have not elsewhere seen mentioned, except a hint or two in foreign papers. One is, that advertising by means of honey leaflets does not hit just the right spot. Do we generally read the printed matter that comes with "Rough on Rats," or "Hood's Sarsaparilla?" If we depended on that, we wouldn't have much idea of those articles, or any other proprietary drug or food. But we *have* a pretty vivid idea of many such things—Ivory Soap, and Scott's Emulsion, and Liebig's Extract, etc. How did we get that idea? From newspaper advertisements, of course. That is my second thought—that it *is* possible to properly advertise honey. *But only a powerful organization can ever do it.* Bargain store grocery advertisements show that common foods, also, come under advertising with profit. "The newspaper habit" is a bad one; but it is an ill wind that blows no one any good, and we might as well take a pecuniary advantage of the fact that the average American citizen does depend for his mental sustenance on that species of literature. There is no question that it would pay if once consistently carried out. It is what all successful firms do. Montrose Co., Colo.

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Feeding Back Extracted Honey to Produce Comb Honey.

BY HON. R. L. TAYLOR.

It has been thought worth while to repeat the experiment in feeding back extracted honey for the completion of unfinisht sections. It has also been found more convenient and desirable to do so owing to the fact that the character of the season has been such that the percentage of partially-filled sections has been greater during the past season (1896) than ever before. This was owing to the shortness of the honey season and the slender character of the honey-flow. The extent of this was such that but now and then a colony completed even one case.

For the purposes of the experiment four colonies were selected. All were hybrid bees, so-called, and very strong. For a brood-chamber, each colony was given a single section of the Heddon hive, containing frames equal to five Langstroth frames. Doubtless a brood-chamber even smaller—perhaps as small as 2½ Langstroth frames—would have been better, and this for two reasons:

First, much less of the honey would have been required for the rearing of brood, as the extent of that would have been reduced by one-half. I have heretofore given reasons tending to show that it requires two pounds of honey for the production of one pound of brood, and that a section of the Heddon hive, if almost entirely devoted to brood, would contain about ten pounds of it. If this is substantially correct, it will be seen by consulting the table presented herewith, that 20 pounds of honey would be required every three weeks to produce the brood of each of the colonies used in this experiment. This amount of brood might have been reduced by one-half without detriment to the well-being of the colony, and one-half the colony saved.

Second, what I have just said appropriately introduces this point. The number of bees continually hatching from five Langstroth frames full of brood constantly increases the strength of the colony so that if feeding is continued any length of time, with the crowding necessary for the production of comb honey, swarming is induced. This would be detrimental to the highest success of the work. With about half that amount of brood the strength of the colony would be kept good, and swarming avoided, for it must not be too readily accepted that a small brood-chamber without reference to the degree of smallness conduces to swarming.

The feeding was begun July 15, soon after the closing of the flow from clover and basswood. Two or more cases of sections were kept upon each colony, and the honey given as rapidly as the bees would take it. The honey was prepared for feeding by thoroughly incorporating with it about one-half its own weight of water, on the supposition that in this condition the bees would handle it more rapidly.

The work with colonies 2, 3 and 4 was closed Aug. 6, one day more than three weeks, owing to the fact that on that date, or shortly before, they had cast swarms, rendering it undesirable to continue them in the work. Colony No. 1 was retained in the experiment until Aug. 29, nearly 6½ weeks. This colony was particularly adapted to comb-building, and showed that, during the first half of the period, but later owing probably in part to the low temperature which prevailed during August, its work was less satisfactory.

Up to Aug. 10 there was no noticeable amount of honey coming from the fields, but later there was some considerable being gathered, tho colony No. 1, being fed, seemed to participate to a very small extent in it, not bringing enough to tinge the color of the comb honey in process of construction, and so I judge not sufficient to make it an appreciable element in the problem under consideration.

Turning now to the table, we find some questions presented which are not altogether easy to answer. We find there so striking a difference between the work of colonies as that one requires more than two pounds of honey to enable it to add one pound to its store of comb honey, while another required but a trifle more than a pound and a third. It might be surmised that the one requiring the larger amount had expended it in the production of a larger amount of brood. If, however, we allow that No. 3 reared an amount of brood equal to that reared by No. 4, viz.: eight Heddon frames full, and deduct from the amount fed each the 20 pounds supposed to be necessary for the rearing of the brood, we see No. 4 accounts fully for all the remainder in its case, while No. 3 lacks 18¼ pounds of doing so.

NUMBER OF COLONY.	Net weight in pounds of unfinisht sections put on the hives.	Amount fed, in pounds.	Amount of honey, in pounds, when completed.	Gain in pounds.	Per cent. of gain to amount fed.	Pounds of honey fed for each pound gained.	Gain in honey in brood-nest.	Per cent. of gain to amount fed with honey in brood-nest considered.	Heddon frames of brood July 15.	Heddon frames of brood at the end of the experiment.
1	225	168½	317¾	92¾	55.	1 81	10¼	61.	7¾	6½
2	62	76½	111½	46½	64.7	1 54	¾	65.7	8	8
3	99¼	75	136	36¾	49	2.04	5	55.6	8	6½
4	66	67½	114½	48½	71.9	1.34	½	72 5	8	8
Total..	452¼	378½	679¾	227½	58 7	1.70	16½	63.		

In like manner, on the above supposition, No. 2 accounts for nearly all the honey given it, while No. 1 comes short of it by more than 30 pounds. It can hardly be that the amount of honey required by different colonies for the rearing of the same quantity of brood can vary very greatly, nor the amount required by the adult bees for food where the strength of the colonies is about equal. At present I see only two other ways of accounting for the deficit, viz.: quiet robbing and varying amounts required for the production of wax. Robbing as an outlet is hardly to be relied upon; wax-production seems more likely to afford some measure of relief.

If the table is examined closely it will be seen that the sections given Nos. 1 and 3 averaged much heavier than those given Nos. 2 and 4. Can it be then that the much greater proportionate amount of cappings of the honey to be done in the one case calls for the production of wax for use in the capping as to account for the apparent discrepancy? It may in some measure, and, besides, some colonies may practice putting more wax into a given extent of comb so as to make it stronger and safer. It is plain there are abundant subjects yet for investigation in bee-culture.

Figures may be made in different ways to determine the amount of profit there is in feeding back. I consider the value of the unfinisht sections as about equal to that of the extracted honey, say 6 cents. This would make the value of these two articles entering into this experiment $50.38. I compute the value of the 679¾ pounds of comb honey produced, at 12 cents per pound, which gives a total value of $81.57, or a profit of nearly 62 per cent.—Review.

Lapeer Co., Mich.

Making Improvements in the Race of Bees.

BY A. BEAMAN.

In looking over the pages of the American Bee Journal for this year, I find two communications and several references to the improvement of the race of bees. It is to be regretted that in one or two instances the thoughts of the writers ran off on the side line of creation—away from the fact that, as every observant bee-keeper knows, bees vary in many particulars as to size, prolificness of queen, hardiness, disposition, etc.—and come to the conclusion that bees are now as perfect as they were in the beginning. Such a conclusion involves a very nice distinction as to what is meant by "perfect." Surely, the writer could not have meant precisely what large numbers of people might think him to mean, namely, that bees have now the same form, and do the same things in exactly the same way as they did at first, rather than that when bees were created they were created perfect in accordance with the conditions that would surround them, and that as they were in perfect accord with their surrounding conditions then, so they are now in accord with present conditions. But conditions have greatly changed, and consequently so must have the bees.

When one tries to change the form or the honey-producing qualities of bees, or the prolificness of queens, or do what we ordinarily call "improving our stock," we change the conditions under which the bees generally live. Rev. Templin mentioned how Mr. Darwin changed the form of his pigeons and produced new breeds. Mr. Darwin, by selecting out some pigeons for breeding together and rejecting others, made a new condition that had the effect of making a new breed. The breeding of pigeons, of chickens, of cats, dogs, horses, sheep, hogs and cattle, to obtain a better quality or kind of stock; the selection of seed corn, of seed oats or wheat having certain characters that are thought to be the best for the purposes in view, is more or less familiar to every one.

If any one has doubted that bees or insects can be changed in form, or in disposition, or improved, it must be because the person has not observed closely enough, and has consequently always thought of these small creatures always the same, each bee exactly like every other—of course forgetting the old saying that there are no two things alike under the sun. Really, the creatures have been too small for him—beneath his notice. But observant bee-keepers, those that love their bees, and are to be found working over and about or among them at every spare moment, or to the neglect of other work, as already mentioned, have found differences between bee and bee, and hive and hive. Beyond a doubt, many differences not found by them can be found by one properly trained in powers of observation, and with proper aids to his five senses, who looks for variations.

Some of our common flowers have only five petals, so far as the most of us know, but some scientists have lookt into the matter and have found that once in awhile one can find a flower with six petals. All of us are aware that four and five leaved clovers can be found in white clover, and less often in red clover.

In the Scientific American, or in the Scientific American Supplement, last spring there was an account of a scientist having produced monsters in moths, by grafting pieces of the pupæ of several moths together and holding them in place with paraffine, very much as one does the bark in grafting trees. One of the illustrations showed a moth with two bodies.

The Chinese make monster gold fish by performing certain surgical operations upon them when they are very young. Certain scientists have made monster animals develop under peculiar conditions.

It seems, then, that those who know how to go about the work can do much more with animals than most people suppose, and it looks very probable, therefore, that the proper person could produce new races of bees that might be much better than those we have at present.

The lengthening of the tongues mentioned by Rev. Templin is a case in point. Certainly if the stores of honey that from a human standpoint now go to waste every year in the corollas of red clover and other flowers with long clovers could be added to the stores that are obtained from the bees from other sources, there would be a gain for the bee-keeper. So there would also, if, as suggested by Mr. Getaz, bees were larger and could carry larger loads. Many other points might be brought forth, in many of which the scientists would be deeply interested. There is then no doubt that bees can be improved by those that know how and have the opportunity, or that such improvement is desired.

The question is, How to go about the work. Mr. Getaz informs us that we cannot, like the breeders of cattle and horses, make note of the points of bees and keep them recorded in a book. Here I think he makes a mistake, and that there is not an animal living, large or small, that cannot have its qualities good, bad, or indifferent, written down on paper. True, the workers do not lay the eggs that keep the colony alive. But whatever qualities they may have can be charged up to the queen. The real difficulty is the time that would be necessary to obtain small results. But time is required in the breeding of all animals, and it is not probable that any one can be found who regrets the time spent in breeding up our best Jerseys, Durhams, our Percherons, Clydesdales, our Chester Whites, Poland Chinas, Essex, or Berkshire, our Southdowns, or our Merinos, or our Plymouth Rocks, or White Leghorns. All of these were once nothing more than ordinary wild animals.

There is also the item of expense, if a single bee-keeper should undertake all the improvements that might be made. To a considerable extent he would be obliged to sacrifice profit from annual crops of honey and wax, or colonies of bees, for improvements the good results of which he might not be able to realize for some 20 years, or perhaps he might be obliged to pass some of them on to his children, and never realize them himself at all.

If the single bee-keeper is not likely to undertake the work of improvement, who will? If the improvements are wanted, as all improvements are, and the necessary time and consequent expense makes it practically impossible for the individual bee-keeper to undertake it, who can?

District of Columbia.

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Marketing Honey—Some Excellent Advice.

BY A. E. HOSHAL.

The first rquisite in the marketing of extracted honey for table use is quality. Nothing but an absolutely first-class article should ever be placed upon the market for this purpose. Good extracted honey will cultivate a taste and sustain a demand for itself, while that which is a little off in quality will destroy such a taste, and consequently with it the demand for extracted honey. A bee-keeper who may happen to have some off-grade extracted honey on hand would better use it for stimulative or winter feeding, make vinegar of it, sell it for manufacturing purposes, or, if the worst must be done, throw it away, rather than place it upon the market for table use. And so long as bee-keepers persist in extracting their honey before it is well capt and thoroughly ripened on the hive, just so long will they have some of this kind of article to dispose of.

Comb honey in sections should never be marketed in the cases in which it was stored by the bees, but should be removed from these, the sections scraped clean of propolis, and, unlike extracted honey, graded into about three grades. Each grade should be crated by itself in new, clean, fresh-looking shipping-cases, and the honey which is seen through the glass in the side of each crate should be a fair sample of that within. These cases can be obtained from any apiarian supply-dealer, and those holding 12 sections each usually take the best on the market.

For marketing extracted honey in bulk, we have nothing better than the 60-pound square tin can encased in wood. With these, extracted honey can be shipt anywhere with safety, and is in convenient shape. For retail purposes neat packages holding 1, 2, 3, 5 or 10 pounds would be required. If the honey be peddled or sold at home, a 5 or 10 pound tin pail will be much in demand, but if placed in a grocery or other store, packages holding 1, 2 or 3 pounds will sell decidedly the best.

I know of no article where cleanliness, neatness and taste count for more in marketing than with honey. Let it once get daubed about, or on the outside of the package, and it is a sticky mess, attracting flies and other insects, and retaining whatever dust or dirt comes in contact with it, making of it the repulsive rather than the attractive sweet of nature. Comb honey which may have become daubed should be returned to the bees for a half hour or so to be cleaned up again. All shipping-cases for comb honey should have their bottoms covered on the inside with a loose paper, the edges being turned up about ⅝ of an inch, so as to form a kind of shallow paper tray, and in this tray small cleats so placed as to support the sections when placed in the crate. The paper trays will catch all drippings from the honey, and prevent it getting outside of the case, while the cleats supporting the sections will prevent them becoming daubed, as they otherwise would if allowed to rest on the bottoms of these trays.

It is best, usually, that extracted honey reach the consumer in liquid form; also, in placing it in grocery or other stores for the retail trade it should be in such packages that it it will be impossible for it to spill or slop out, even tho it should be turned upside down. Each package should have upon it full directions for liquefying the honey it contains should it granulate in the consumer's hands; also be neatly and tastefully labeled, and bearing the bee-keeper's name and address.

Be willing to pay a fair wage to those who will undertake to sell for you, and don't expect them to be able to sell your honey at a higher price than what you can yourself, unless they have a better article. Possibly the best way to arrange all this—and it is done and recognized in about all kinds of commerce—is to fix the selling price, and then allow a certain percentage off to the trade, or those who sell our goods for us. If a grocer or other merchant will undertake to handle your honey then don't go and retail to those who might otherwise become his customers, nor peddle it throughout his market field at the same price which you charged him for it. This would be refusing to pay an honest wage to those who work for you, besides cutting the price of honey and doing much to drive your own product out of the market. Yet, how many bee-keepers there are who do not recognize this.—Farmer's Advocate.

"Profitable Bee-Keeping, with Hints to Beginners"—the nine articles by Mr. C. N. White, of England, begin this week in the Bee Journal, as we have received the first two of the nine. See page 426 of this number for further information concerning these articles, and also the premium offers for getting new subscribers for the last six months of 1898.

We would like to have all our readers, if possible, get and send in the subscriptions of their neighbor bee-keepers. The way to get rid of slipshod, old-fogy bee-keepers is to place under them the jack-screw of good bee-literature and raise them up to the level of those who are striving to keep bees in the modern and proper way. By so doing all will be helpt.

☞ Many of our subscribers have already sent in new subscribers on the offers made on page 426, but there is room for many more. Before Aug. 1 we hope to add 1,000 new subscribers to our list. It can be done if every one will do only half as well as some others have already done.

☞ Send for free sample copies to work with, or send us the names of non-subscribers, and we will mail the sample copies to them.

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for $1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at $1.00), and 10 cents extra.

The Wood Binder for holding a year's numbers of American Bee Journal, we propose to mail, postpaid, to every subscriber who sends to us 20 cents. It is a very simple arrangement. Full printed directions accompany each Binder. Every reader should get it, and preserve the copies of the Bee Journal as fast as they are received. They are invaluable for reference, and at the low price of the Binder you can afford to get it yearly.

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 20 cents; 100 for 35 cents; or 200 for 60 cents.

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all other bee-keepers possible to subscribe for it. See premium offers on page 426.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Difference in Queen-Progeny—Swarming.

In reply to Geo. H. Stipp (page 397,) I don't know why it is that the queen progeny of a pure queen differs so much from the mother and from each other; I only know the fact. Some pure imported queens are very dark, and their queen progeny will be varied, altho they all will be uniform as to their worker progeny.

Mr. Stipp is right in thinking a young queen may swarm in her first year, when reared in the same hive. Such cases occur by the thousand. But they are virgin queens, and Mr. Gravenhorst was probably talking about laying queens. If a colony rears a young queen on its own account, and that queen swarms after commencing to lay, it will be a very notable exception to the rule. C. C. MILLER.

Trying to Keep Down Swarming.

I am running for comb honey. Now, if I should keep three or four supers of sections on my hives, giving them an abundance of room, would they be so apt to swarm? Would they fill the sections as nicely as they would if they were more crowded?

Two of the nuclei I bought last year (1897) did not swarm last year, and they are just rolling in the honey, and if I can keep them from swarming I am sure they will give me surprising results. CENTRAL WISCONSIN.

ANSWER.—No amount of super room will make sure work in keeping down swarming. Pile them up 10 high, and your bees will be likely to swarm. But plenty of super room will do something toward prevention of swarming. A colony crowded for want of enough super room may be forced into swarming that otherwise would not have thought of swarming so soon, if indeed it would have swarmed at all. So it may do a good deal to prevent swarming if you have three or four supers on at a time. But it's running a good bit of risk. If the season should suddenly close, there you would be, with three or four supers full of unfinisht sections, when if you had been satisfied with one or two supers less on a hive, you might have had nearly all finisht. Sometimes, however, it may be well to run some risk. Last year I did it, and it came out all right, but it made the cold chills run down my back sometimes when the question came to my mind, "What if the flow should suddenly stop and the 15,000 pounds of honey or more, scattered among the sections, should be left unsealed?" So, unless there's a big flood of honey coming, with every appearance of continuing, don't take too much risk.

Raise up your hives by putting a block under each corner; ¾-inch to an inch will be none too high to block up.

Section-Holders and T Supers.

1. I use the section-holder and one-pound section. I find that between the first section-holder and the side of the super there is not space enough for a good bee-passage. How shall I manage to secure the necessary space?

2. When using full-width wood-separators, the upper edge of the separator comes up even with the tops of the sections and divides the passage between the sections, practically closing the spaces. How can I tier up with such arrangement?

3. I have only 20 supers. What will have to be done to them to change them from the section-holder super to the T super?

4. What do you think of tin separators if made from perforated tin and zinc? And what would be the probable cost per hundred? ARKANSAS.

ANSWERS.—1. There is probably no good way to make the passage greater; but are you sure it's a matter of any importance? A sixth of an inch is all the passage needed, and the bees will go up in the next passage if they can't get up at the side.

2. If your section-holders and supers are made the usual way, the super is deeper by a bee-space than the depth of sep-

arators and sections, making a full bee-space between the contents of one super and the next one above it, in which case there is no difficulty about tiering up.

3. Plane down the super so as to be 4½ inches deep. Put a board inside at one end so as to make the inside length 17⅜, and nail on this a strip of tin, the same as at the other end. Drive in at the proper places the six staples of the particular kind used for supporting the T tins.

4. That's a thing that seems naturally to suggest itself to a great many, but I don't know of any one who has continued using anything of the kind, and it's doubtful if you'll like it. Cost, probably $3.00 or $4.00 a hundred.

Wintering—Sun and Shade, Etc.

1. Which is the better way for wintering out-doors, a 2-story 8-frame hive, or a single-story 8 or 10-frame hive? If wintered in a 2-story 8-frame hive, is there not too much room? And if it is the better way, will the bees commence to rear brood earlier than in a single-story hive? Are there any other reasons?

2. Is it best to leave the bees packt summer and winter in chaff-hives or winter-cases?

3. Does it make any difference for brood-rearing if the cells are ¼ of an inch longer than they need be?

4. Is it better if the hives get the sun at morning and night, than if they stand always in the shade?

5. Will the bees winter well in a 2-story hive of five or six frames each? WISCONSIN.

ANSWERS.—1. If a colony is strong, there is probably an advantage in having the two stories, and possibly even if it is weak. I don't know that they'll commence rearing brood any earlier in the double story, but they are a little more remote from the outside air in the upper story, and if they are strong enough they will need some of the room in the lower story for stores and brood.

2. It is probably best to remove winter-cases. Chaff-hives are left the same winter and summer, as they cannot well be changed.

3. The bees will cut the cells down to the proper depth, but of course it makes just so much extra work.

4. It is probably better.

5. Yes; but if a colony is very strong it would be better to have larger hives.

Preparing Bees for Winter—After-Swarms, Etc.

1. I live on the northern shore of Lake Ontario; the mercury frequently falls anywhere from 20° to 30° below zero, and we have a great deal of north wind. Would it not be a good plan to line the winter case for single-wall hive with building-paper, filling the space between the paper and the winter-case with chaff?

2. Which would be warmer, to leave the summer cover on the hive, or chaff-cushion? and will I need to remove some frames and put in chaff division-boards?

3. Would it be best to have all hives face the south, in this locality, or will it make no difference?

4. Would you contract the entrance in winter, or leave full width?

5. When you transfer from box-hives by placing a new one filled with foundation over it, do you close the entrance of the old hive? and would the bees work up through a couple of small holes, perhaps two or three inches long, or would I have to remove the top of the old hive?

6. Can I unite several small after-swarms until I have one good, strong colony, by shaking some of the bees from the frames, with the new swarm, and allowing all to run in together?

7. Has the A. I. Root Company a branch office in Canada? NEW YORK.

ANSWERS.—1. It would probably be a good thing.

2. The chaff-cushion is likely best on top, but it's hardly necessary to take out any frames to replace with cushion.

3. It isn't likely there's much difference, some favoring one direction and some another.

4. Leave open full width.

5. Transferring by putting the empty hive over isn't much practiced, and you might not like the plan so well as to drum out 21 days after swarming. If you have only small holes for the bees to go up, the queen would be a long time going up, and she might not go up at all, but they might be drummed up, and if there was a frame of brood above they would stay there. In any case it would be a big help to put a frame of brood in the new hive. If the bottom of the old hive is not nailed on, you can turn it upside down and set the new hive over it. It will be at least as well if the entrance is only to the new hive.

6. Yes, and it will be much better than to have a lot of weaklings. But why not prevent all after-swarms in the way already directed several times? Set the swarm on the place of the old colony, putting the old colony close beside it, and a week later move the old colony to a new location. That's better than to have the trouble of hiving after-swarms and then uniting them. 7. No.

Pollen in Sections—Other Questions.

1. How can bees be prevented from putting pollen in the sections, if at all? Will a greater number of frames in the brood-chamber help to prevent this?

2. Will bees store honey enough in an 8-frame hive to winter out-doors, with protection?

3. Can I use Hoffman frames in two Ideal supers, for extracted honey?

4. How much more extracted than comb honey will a colony produce, provided they have comb built for extracted honey, and are allowed to cap it? Authorities differ.
ILLINOIS.

ANSWERS.—1. I don't know. Sometimes bees put pollen in sections when there seems to be no special reason for it. I suspect they are more likely to do so if the sections are very close to the brood-combs. Yes, it is quite possible that plenty of room in the brood-chamber may make a difference.

2. Sometimes, and sometimes not. It may happen that the room is so largely taken up with brood when sections are taken off that very little honey is in the brood-chamber, and if no late honey comes in the bees may starve.

3. They would be quite too deep.

4. I'm very much like the authorities—I differ too. And seasons and conditions differ. In my locality I don't think there is such a great difference, while in Nebraska some say they can get three times as much extracted as comb, where heart's-ease abounds.

Why Don't they Swarm?—Opening Hives.

1. I have a colony of bees that I put into a new hive. I clipt the queen's wing and she went to work all right for a few days, and she has young bees in the combs. Now I can hardly keep her in the hive. What can I do?

2. I have four other good colonies, and they have not swarmed yet. What is the matter with them?

3. How often can I look into the hives without doing any damage to the bees? IND. TER.

ANSWERS.—1. You don't say whether the queen leaves the hive alone or with the bees as a swarm. If she leaves it alone, it's a crazy streak, and the only thing you can probably do is to confine her with perforated zinc. If she leaves with a swarm, then the case is to be treated as any case of swarming bees. If the queen was regularly reared in the hive, according to all rules she ought not to swarm this year.

2. That's a good deal like saying, "My neighbor is sick; what's the matter with him?" It is possible that they have all the room needed for a brood-nest, and on that account have no desire to swarm, for no matter how strong a colony may be, it is not likely to swarm if all the right sort of room is present. Again, it may be that forage is not plenty enough to warrant swarming.

3. Probably if you should open a hive for a short time every day when warm enough, you might not notice any particular harm from it, yet every time a hive is opened it must hinder somewhat. Better not disturb the bees unless there is some fair reason for it.

Bee-Space Above Frames and Sections.

Is it necessary, to insure the best results, to have a bee-space above the frames and sections? TORONTO.

ANSWER.—The bees will do just as good work without the bee-space, but if you try both ways you will probably decide that you want the bee-space for other reasons. If there is no bee-space you are likely to kill a lot of bees every time you set the sections over the frames, and with the bee-space there is not the same gluing.

☞ See "Bee-Keeper's Guide" offer on page 415.

AMERICAN BEE JOURNAL

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Omaha the Place.—We have received the following from Dr. A. B. Mason, Secretary of the United States Bee-Keepers' Union, which fixes the place of the National convention for 1898 at Omaha, Nebr.:

EDITOR OF AMERICAN BEE JOURNAL:—Please say in the next issue of your journal that after thoroughly considering the matter of the place for holding the next convention of the United States Bee-Keepers' Union, the Executive Committee has decided in favor of holding it at Omaha, Nebr. The exact date for holding the convention will be fixt by Mr. E. Whitcomb, upon whose broad shoulders will be put the pleasure of securing reduced railroad and hotel rates, and a place for the convention to meet, etc. His shoulders are broad, and he is right on the ground.

A short time since Mr. Whitcomb sent me some particulars regarding rates from which I take the following:

"Every day during the Exposition tickets will be on sale from all Western Passenger Association territory to Omaha at one and one-third fare for the round trip, except their rates from the following points, which will be as follows: Chicago, $20; Peoria, $17; St. Louis, $17; Denver, $25. Tickets will be limited to return 30 days from date of sale, not to exceed Nov. 15. From June 1 to Oct. 15 the passenger rates to Omaha from all the principal cities and towns in the United States beyond the Western Passenger Association territory will be 80 per cent. of double the first-class fare. Tickets will be good to return until Nov. 15."

But I'm expecting (?) lower rates, for Mr. Whitcomb told the convention at Buffalo last summer, that if the Union would hold its next convention at Omaha during the time of holding the Trans-Mississippi Exposition, we should have "as low rates as to any place on earth."

We know that Mr. Whitcomb will do "his level best" for the comfort of those who attend the convention, and show us "the sights" on the Exposition grounds.

A prominent Western bee-keeper wrote me a few days since that "the rate, however, cuts but a very small figure." If we poor bee-keepers were all rich like him it wouldn't, but this is only another evidence of the old saying, that localities differ.

It is probable that the convention will be held during the first part of October, and further notice of rates and time of meeting will be given when known. A. B. MASON, *Sec.*

Sta. B, Toledo, Ohio, June 30.

Now that the *place* of meeting is settled upon, let all begin to make arrangements to be there, trying, if possible, to have even a larger attendance than at the World's Fair convention. Dr. Miller, who was then president, said that convention was too big for him to properly preside over. Now, the one whose duty it is to preside at Omaha is not one-tenth as big a man as Dr. Miller, and has to say "I don't know" ever so many more times than he does, and yet the present president hopes that there will be at least twice as many in attendance at Omaha as at the World's Fair convention. Not that he is a more capable presiding officer than Dr. Miller, but he would like the privilege of looking into the faces of 500 or 1,000 bee-keepers at one gathering. And when he can't handle the presiding part, he will call on several ex-presidents to help.

All can expect that the Secretary, Dr. Mason, will provide a great program. He knows how.

◆

Southern California.—Prof. Cook has sent us the following paragraphs, dated June 23, from Los Angeles county:

We notice that some of the red-gums are just now coming into bloom. In the early morning these trees are noisy with the hum of bees, as they are beautiful with their clusters of bloom. We notice, also, that the peppers are crowded with bees all the day long.

Even here at my home the bees are getting considerable honey, despite the unprecedented drouth. I lookt in some hives a few days since, where the single tier of supers were well filled with fine honey, nearly all capt. It is to be said, however, that few localities in southern California secured as much rain as did this place the past season.

About Ramona and Julian—noted for their fine apples—in San Diego county were exceptions in all southern California this season. Each had copious rains, more than was needed. Thus in these localities bees are doing wonderfully well, and crops are exceptionally good. Our friend Taylor, ever alert for the worm, caught him in going to these favored regions with his bees, and is securing, as we learn, a fine crop of honey. A. J. COOK.

◆

The Home Market for Honey.—Mr. F. L. Thompson, on page 419 of this number of the Bee Journal, gives a very interesting experience in attempting to sell honey in the home market. All are not cut out for salesmen, and evidently Mr. T. belongs to that number, tho he gave it a thorough trial, and is to be commended for the plucky way in which he did it.

Of course, selling honey from house to house is not a rapid way to acquire riches. Many can make four times as much at something else. But there are doubtless bee-keepers without number who can do well at selling their honey crop themselves in surrounding towns. Surely, there are many who would have done better, last year, had they disposed of their honey near home, rather than ship it to a distant overcrowded city market and take what the dealer was able to realize for them.

This question of profitably disposing of the honey crop is one that must ever be of great interest to the producers. Upon it depends their success more than upon any other one thing—aside from nectar in the flowers. But after the crop is secured, unless it finds a remunerative market, only loss and discouragement can result.

We have much faith in Mr. Thompson's suggestion of co-operation among bee-keepers. We believe that if a number of bee-keepers would combine in the marketing of their crops, a much better net result could be secured. Each city should have in it, from Sept. 1 until April 1, a honey depot in charge of an able bee-keeper or two, whose business it should be to see that the retail groceries are supplied with honey, and that only pure honey is put on the market. The bee-keepers should in a way control the market—have a monopoly in the honey line, if you wish to call it that—and wholesale to the grocers all the honey that is sold in the town where they have their headquarters, so far as is possible for them to do.

We should like to see this plan tried first in a town of say 10,000 population. A city like Chicago would be almost too large to begin on.

◆

Ship Surrendered to Bees.—This was not one of Dewey's or Sampson's squadron—theirs is not of the surrendering kind. A newspaper correspondent in Tacoma, Wash., reported that the bark Shirley, which has carried millions of feet of lumber on that coast, is now said to have aboard a small cargo of honey. Her owners recently decided to put her in the Klondike service, and Mr. L. B. Mitchell was sent to Quartermaster Harbor with men to get her ready for repairs. Mr. Mitchell says:

"We found that she had been taken possession of by honey-bees, and in going into her we found every passage and room was apparently full of bees. We shut the hatchway and thought we had them imprisoned, but we found a steady stream going and coming through the hole left for a stove-pipe in the cabin. We were on board 30 minutes, and in that time the column of bees continued to move, making a noise like escaping steam. We were unable to work on board until something should be done. We lowered into the hull a plank of burning cedar bark, and closed up everything. A great many of the bees were killed, but we were unable to go into the bark the next day. Some think she may contain a ton of honey, or even more."

◆

Bees at the North Pole.—The man who gleans the "Stray Straws" for Gleanings—why not call him the "Straw-carrier?"—finds in Le Rucher Belge that "the explorer Ejrind Asrup found many bees in latitude 83° north. He thinks they may be at the North Pole, as the remaining 7° would make no great change in flora. There's only three months summer; but as the sun doesn't set in that time it's as good as six months here, and plants develop with astonishing rapidity and vigor, and the flora is of extreme richness."

We wonder if some enterprising bee-supply dealer won't establish a branch house next door to the North Pole now. Talk about hardy bees—why not get a few queens from that semi-sunless land. They ought to be tough enough to extract sweetness from the "snow-ball" bush!

◆

Honey as Food is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey among should-be consumers. The forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 30 cents; 50 for 50 cents; 100 for $1.00; 250 for $2.00; 500 for $3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

◆

The Names and Addresses of all your bee-friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums we are offering. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.

THE WEEKLY BUDGET.

HON. EUGENE SECOR, of Winnebago Co., Iowa, reported as follows, June 27:

"Basswood will open in about a week. But little honey has been stored so far."

MR. A. W. SMITH, of Sullivan Co., N. Y., wrote us June 23:

"The weather has been too wet and cold for the bees to get a large crop of white honey here."

REV. H. H. FLICK, of Lycoming Co., Pa., wrote us June 24:

"It is a poor season for bees here so far—cold and rainy, tho the weather is good to-day. We hope for a better honey-flow."

DR. A. B. MASON, of Lucas Co., Ohio, writing us June 30, reported:

"Sweet clover began blossoming a week ago, and the bees are quite busy. I've been so busy for a few days that I haven't lookt to see what the bees are accomplishing in honey yielding."

PROF. A. J. COOK, of Los Angeles Co., Calif., wrote us June 24:

"We have vacation now, and I am going to rest, as I need it. I shall work at institutes. Shall hold two in the region of Ramona, and hope to see bees and honey booming."

Prof. Cook is a very active man, and evidently does not believe in trying to rust out in the sunny clime of California. The world needs the busy workers—both men and bees.

HON. R. L. TAYLOR, in the Review, seems to have started in to reform the grammar used by some of the correspondents of bee-papers, and also that of the editors thereof. He will have a large job—and likely his trouble for his pains; and, judging from some of his "criticisms" so far, a lot of painful trouble (to him). We are perfectly willing that he shall waste all the space the Review will allow him, in trying to reform the language printed in the American Bee Journal. But lest he forget, and devote more time to criticising the literary than the apiarian part of this journal, we will say that this is neither a grammar nor a rhetoric, but a paper devoted to telling in a simple, plain way how to keep bees.

By the way, as a criticism on Mr. Taylor's writing for the Review, we wish to say that we do not authorize the use of the letters "A. B. J." for "American Bee Journal" in public print. As we are the highest authority on this particular case, we would suggest that Mr. Taylor either discontinue referring to this paper as "A. B. J.," or else be consistent and use "A. B. K." for "American Bee-Keeper," "B. K. R." for "Bee-Keepers' Review," etc.

BEEDOM BOILED DOWN.

The Largest Apiary in England is claimed to be that of T. B. Blow & Co., at Welwyn, Herts, consisting of more than 200 colonies.—British Bee Journal.

Age of Hives.—I have hives that I made more than 30 years ago that have never needed repairs, except a second coat of paint.—C. Dadant, in Revue Internationale.

Wintering Without Pollen.—Gilbert Wintle had nine colonies of bees given him late in September—just the bees with no stores. He put the nine lots in three hives, either on foundation or empty combs, and fed up with sugar syrup.

They came through in fine condition, and he thinks it good proof that bees have no need of pollen for wintering, as the latter part of September was too late for gathering pollen.—Canadian Bee Journal.

* * *

The Yield of a Linden Tree is equal to that of a whole acre of buckwheat, according to A. Sonsiedsky, in Revue Internationale. Would York State men agree to that?

* * *

Improvement in Extractors.—Rambler, in Gleanings, has continued after a long vacation his series of rambles. He mentions an improvement in G. W. Brodbeck's extractor. There is a deep receptacle at the end for the wax and honey to collect, and this saves the honey from being so much colored by the heat.

* * *

The Mosquito-Hawk and Bees.—This insect, which is also called dragon-fly and darning-needle, has been accused of destroying bees. A. J. Wright says, in Gleanings, that whatever it may be in other localities, he considers it a friend. In the day-time it makes havoc among gnats and mosquitoes, and at night it devours bee-moths.

* * *

Honey-Vinegar.—Boil 25 quarts of rain-water with two quarts of honey, skimming frequently for about an hour. When cool put into a 30-quart vessel, and fill full with strong vinegar. Put it in a warm place with the bung open, to ferment for 9 or 10 weeks. If too weak, add strong vinegar. Draw off half to bottle, then fill afresh with honey-water.

* * *

Wintering Bees in Cellars.—Henry Alley doesn't believe in keeping the temperature of the cellar continuously as high as 40° to 50°—too much hot-bed plan. His bees were confined from the middle of December till March 9, the temperature varying with the weather. When at zero outside the thermometer stood at 20° inside, and it never went above 45°. His bees came through in fine condition.—Gleanings.

* * *

Transferring.—The question being askt in Canadian Bee Journal as to the best time and way to transfer from box hives, all agree upon the time of fruit-bloom except A. D. Allan, who replies as follows:

"Wait till they are strong, nearly ready to swarm. Operate as follows: Reverse the hive and set an empty box on it, drive the bees up, divide about equal, put one part with queen in the new hive on the old stand, the other part put back in the old hive and move to a new stand. In 21 days repeat the operation, only put all the bees in the new hive, set the old hive at the side of your apiary until the bees have removed the honey, then cut out the old combs and put them into the wax-extractor."

* * *

Eight or Ten Frames—Which?—Editor Root has been advocating large brood-nests, and a correspondent rather accuses him of inconsistency in advocating 8-frame hives. Mr. Root replies:

"I do not know but I am like Dr. Miller—I don't know which is better—the 8 or 10-frame. I know this: That the 8-frame with single brood-chamber is not nearly large enough. I am pretty well satisfied, also, that the 10-frame is too small. I am not sure that a 12-frame Langstroth brood-nest is large enough. An 8-frame body is plenty heavy enough to lift when it is full of honey; and I am almost inclined to believe that two 8's—that is, 16 frames in all—are none too big for a brood-nest; but 10-framers would be too large. No, I prefer an 8-frame to a 10-frame; and I think I should prefer a 12-frame to a 10-frame; but if a 12-frame is too small, then I should rather have two 8-frames."

* * *

Leveling Unfinisht Sections.—C. Theilmann gives an interesting bit of history regarding B. Taylor's comb-leveler, in Gleanings. Mr. Taylor opposed the use of drawn combs, but after seeing what beautiful sections Mr. Theilmann got by means of them, he repented, and the next year he brought to the convention his comb-leveler. Mr. Theilmann says the whole secret of getting as nice sections of honey from these drawn combs as from foundation is in getting rid of "the big rim around the cells, which is generally soiled more or less; and if not taken away, the bees will use part of it for capping the honey, which gives it a yellow tint." Editor Root—who has stoutly maintained that it was necessary to reduce the depth of the cells to ⅜-inch—now says: "I think we can assume that the whole purpose of leveling, as was once advocated by the late B. Taylor, was to get rid of the thickened, soiled edges of the cells as they are ordinarily left by the bees."

FOR THE READERS OF THE AMERICAN BEE JOURNAL.

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QUESTION-BOX

In the multitude of counsellors there is safety.—Prov. 11-14.

The Queen and Her Mating.

Query 75.—Under favorable conditions—1. How many days will elapse after the queen hatches from the cell before she takes her flight?

2. How many days after hatching before she commences laying?

3. Is it true that the mating of the queen and drone always causes the death of the latter?—Utah.

Emerson T. Abbott—I do not know.

J. A. Stone—1. From 1 to 5. 2. From 8 to 15. 3. Yes.

J. A. Green—1. 6 or 7 days. 2. 10 days. 3. I do not know.

Dr. C. C. Miller—1. 5 days or more. 2. Something like 10. 3. Probably.

Chas. Dadant & Son—1. About 6 days, never short of 5 days. 2. 2 to 4. 3. Yes.

Mrs. J. M. Null—1. 5 to 11 days. 2. 10 to 16 days. 3. Death is a physical necessity.

R. L. Taylor—1. From 4 to 8 days. 2. From 6 to 15. 3. I think so, of necessity.

Dr. J. P. H. Brown—1. Usually in 4 or 5 days. 2. On an average, in 10 days. 3. 'Tis true, I believe.

Prof. A. J. Cook—1. 3 to 6—usually 5, with suitable weather. 2. 3; occasionally 2. 3. Yes.

J. M. Hambaugh—1. From 3 to 7 days. 2. 6 to 10. 3. Yes, according to our best authority.

E. France—1. I don't know. 2. A week to 10 days. 3. I don't know, and don't think any one knows.

O. O. Poppleton—1. From 6 to 9 days usually; but there are many exceptions. 2. Add a couple of days to above figures. 3. I don't know, but think yes.

D. W. Heise—1 and 2. That will vary greatly, depending much upon the weather, and other conditions. 3. I give it up; ask them that know.

W. G. Larrabee—1 and 2. I never saw a queen take her flight, but she will commence laying from 3 days to a week after hatching. 3. I don't know.

J. E. Pond—1. Usually 2 or 3 days. 2. 5 or 6 days. 3. Yes, the drone loses the male organ at the time of mating, and death, as a rule, immediately results.

Mrs. L. Harrison—1 and 2. It will depend upon the weather as to the time of flights and the laying of the queen. 3. I don't know. What is the difference, anyhow, whether he lives or dies?

C. H. Dibbern—1. From 12 to 16 days. 2. I am not sure about this, but I think the time varies somewhat. 3. That is the common understanding, but there may be exceptions.

E. S. Lovesy—1. About 5 days. 2. 8 to 9 days. 3. I would very much like to know. I have many times seen a young queen come out of the hive with the bees, circle in the air, and usually return and enter the hive in about 10

Sweet Clover
And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order.

	5lb	10lb	25lb	50lb
Sweet Clover (white).	.60	$1.00	$2.25	$4.00
Alsike Clover........	.70	1.25	3.00	5.75
White Clover.........	.80	1.40	3.00	5.00
Alfalfa Clover........	.60	1.00	2.25	4.00
Crimson Clover.......	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

GEORGE W. YORK & Co.
CHICAGO, ILL.

Young Tested Italian Queens For 75c each.....

I have a fine lot of them, and can fill orders **promptly.** Address,

F. F. MORROW, Wallaceburg, Ark,
24Atf Please mention the Bee Journal.

Muth's HONEY-EXTRACTOR Square Glass Jars.
Root's Goods at Root's Prices.

BEE-KEEPERS' SUPPLIES in general, etc etc. Send for our new catalog. **Practical Hints**" will be mailed for 10c. in stamps. Apply to—

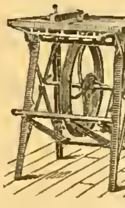
Chas. F. Muth & Son, Cincinnati, Ohio.

Please mention Bee Journal when writing.

ITALIAN QUEENS bred for honey-gathering by the best methods, with no black bees in my apiary; mismated Queens are rare. Untested, 50c each; $5 doz. After July 1, 45c, or $4.50 doz. Tested, 75c each or 3 for $2. Send for circular. Safe arrival.

W. J. FOREHAND.
25A8t Fort Deposit, Ala.

Barnes' Foot-Power Machinery.



Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will. Catalogue and Price-List Free. Address, W. F. & JOHN BARNES,
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Farm Bee-Keeping.

The only bee-paper in the United States edited exclusively in the interest of the farmer bee-keeper and the beginner is **THE BUSY BEE,** publisht by—

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Write for FREE SAMPLE COPY NOW.

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The American Poultry Journal,
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A Journal that is over a quarter of a century old and is still growing must possess intrinsic merit of its own, and its field must be a valuable one.

Such is the American Poultry Journal. 50 cents a year.

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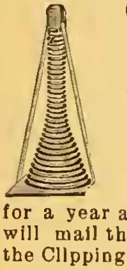
July 8

the Nickel Plate Road will run an excursion to Chautauqua Lake, at one fare for the round trip. Write to J. Y. Calahan, 111 Adams Street, Chicago, for particulars. Tel. Main 3389. (39-26-2)

DR. PEIRO,

CENTRAL MUSIC HALL, CHICAGO.

Please mention Bee Journal when writing.



Queen-Clipping Device Free

The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 30 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

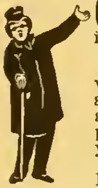
GEORGE W. YORK & CO.,
CHICAGO, ILLS.

BEES, HONEY, MONEY

Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

J. P. H. BROWN, Augusta, Ga.



OUR PRICES are worth looking at. We are making the new

Champion Chaff-Hive

with dovetailed body and supers, and a full line of other Supplies, and we are selling them CHEAP. A postal sent for a price-list may save you $$$$

R. H. SCHMIDT & CO.,
Box 187 SHEBOYGAN, WIS.

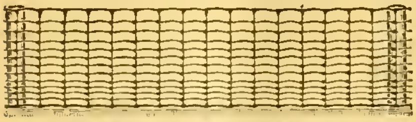
IF YOU WANT THE

——BEE-BOOK

That covers the whole Apicultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keeper's Guide.

Liberal Discounts to the Trade.



The New War Bonds

will float without the aid of a promoter. Full value and kept faith establish a market, as they have done, for Page fence.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

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The Very Best Queens at the Lowest Prices....

Beautiful Golden Italian Queens bred from the best honey-gathering strain, reared by the best known methods—50 cents each. Select Tested, $1.00. **No black bees here.**

W. G. GATHRIGHT,
25A3t DONA ANA, NEW MEX.

Please mention Bee Journal when writing.

First Excursion of the Season to Buffalo

Via Nickel Plate Road, July 14-17, at one fare for the round trip. Choice of water or rail between Cleveland and Buffalo within final limit of ticket. For further information call on or address J Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone Main 3389. (31)

minutes. I have seen her settle with the bees as if tired, and I have seen them hived as a swarm, but they always rush out and enter their own hive. But I have never seen anything that would shed any light on this question.

Dr. A. B. Mason—1. The time varies. I have had them fly in 5 days, and also not for 8 days, under the conditions named. 2. From 2 to 4 days. 3. I don't know, but our leading writers say it does.

Eugene Secor—1. Prof. Cook says 5 to 6 days; Cheshire, 6; Cowan, 3 to 5; Langstroth-Dadant, 6 to 7; Root, 5 to 7. 2. Prof. Cook, 2 to 3 days; Cheshire, 2; Cowan, 2; Langstroth-Dadant, 2; Root, 2. 3. I don't know.

P. H. Elwood—1. Cowan says from 3 to 5; Cheshire says 6 days. 2. Cheshire says 2 days. We believe it takes with us nearly 10 days on the average, from hatching to laying. 3. I do not *know* that it ever causes death, but suppose it is so.

R. C. Aikin—I believe 3 to 4. 2. All favorable, 9; some 8; some 10 to 12. 3. I never saw the mating act, but have seen a number of queens evidently very soon after mating, a string trailing after them ¼ to ¾ inch long—supposed to be a part of the drone.

Rev. M. Mahin—1. Usually about 5, if the circumstances are *very* favorable. 2. Under very favorable circumstances in 7 days, but that is much under the average. 3. I suppose it is. I discovered in my boyhood that the extrusion of the male organs produced instant death.

G. M. Doolittle—1. If the bees allow her to emerge (not hatch; the larvæ hatch) from the cell as soon as mature, from 5 to 7, as a rule. If held in the cell by the bees, then from 24 to 72 hours after allowed her liberty. 2. A queen commences laying about 2 days after successfully meeting the drone. 3. Gently press a "ripe" drone till the sex-organs protrude, and the drone expires at once. See?

G. W. Demaree—1. It depends upon the weather, and to some extent on the time of year. About 18 years ago I spent nearly a whole breeding season to test all these questions, and have observed closely ever since. To put it definitely, she will commence her wedding flights—she makes not less than three—on the evening of the 7th day of her age. 2. She begins to lay in 2 or 3 days. 3. I believe it is.

GENERAL ITEMS

Report from an Old Bee-Keeper.

I have kept bees for 50 years, and have experimented in several ways to get the most honey. Some 14 or 15 years ago I got the Simplicity hive. I have lots of neighbors that are wondering how I get so much nice comb honey. They can't do it with their hives and supers. I got more than 2,000 pounds of as fine comb honey last year as could be wisht for, from 14 colonies. My hives are all alike, each super holding 56 sections. I just pile up in the spring say 112 sections at first, in April; in May I put on one more super, and when the bees get

California

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The Pacific Rural Press

The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated $2.00 per annum. Sample Copy Free.

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PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y.

Please mention Bee Journal when writing.

FREE FOR A MONTH.

If you are interested in sheep in any way you cannot afford to be without the best and only weekly sheep paper published in the United States.

WOOL MARKETS AND SHEEP

has a hobby which is the sheep breeder and his industry, first foremost and all the time. Are you interested? Write to-day.

Wool Markets & Sheep, - - Chicago.

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BEE-KEEPERS! Let me send you my 64-page Catalog for 1898

J. M. Jenkins, Wetumpka, Ala.

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COMB FOUNDATION Wholesale and Retail.

Working Wax into Foundation for CASH **A Specialty.**

Hives, Sections, and a full line of Supplies. The **best** of everything. Write for Catalog, with prices, and samples of Foundation and Sections.

BEESWAX always wanted for cash or trade.

GUS DITTMER,
AUGUSTA, WIS.

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Cash PAID FOR Beeswax

For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 25 cents per pound, CASH. No commission. Now if you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

GEO. W. YORK & CO.
118 Michigan st., CHICAGO, ILL.

Texas Queens

Best honey-gathering strain in America. Tested, $1.50. Untested. $1.00. Write for a Circular. **J. D. GIVENS, Lisbon, Tex.**
7A26t Please mention the Bee Journal.

ITALIAN BEES AND QUEENS FOR SALE...

Queens, $1.00; after August. 50 cents. MRS. A. A. SIMPSON, Swarts, Pa. 27A6t

Please mention Bee Journal when writing.

to work on it I put on one more, so I give all the room they can fill, and keep ahead of them all summer. I got from 200 pounds down to 56 from them last year, according to the size of colony. Last year I got from 50 to 100 pounds each from the new swarms, all from natural swarming. Give me natural swarming, by all means. I now have 24 good colonies, with over 2,800 sections on them. I have lost two swarms.

E. D. Bacon.

Shelby Co., Ill., June 25.

Very Little Honey So Far.

Bees are strong, but no swarms, and very little honey yet, tho plenty of bloom. Red clover seems to be the only thing that will furnish honey, but the bloom is so deep that it is hard for the bees to work. Albert Holladay.

Clinton Co., Ind., June 22.

Threatened with Foul Brood.

My 27 colonies are in fine condition at present, but as foul brood has gotten into an apiary 3½ miles south of here, it is hard to tell how things will come out.

Is there any law in Michigan to compel the apiarist to try to get rid of the disease? The disease was brought about through his carelessness.

I. D. Bartlett.

Charlevoix Co., Mich., June 27.

[Yes, Michigan has an old law on foul brood, which was publisht in the Bee Journal last year. Some suggestion was made at the last Michigan State convention looking toward its revision, we believe.—Editor.]

Wet Spring, Sweet Clover, Etc.

I had intended to send a few apiarian notes some time before this, but the weather was so very hard on the bees that it took all my spare time to give them a little courage and consolation in order to keep them from deserting their hives. The spring was very wet, and bees could not make a living in this part of the country before the first of June; since then they have been working on white and Alsike clover enough to breed up well. However, they are now ready for that flow we long have waited for, but it has not yet appeared.

My experience with sweet clover is just opposite to some that are having a world of trouble trying to get rid of that "notorious weed." The spring of 1896 I got some seed from a reliable source, sowed some of it on wheat ground, the same as red clover seed, and the rest I scattered around in fence corners, on good ground, where I was sure it would grow. Of that lot of seed I found one small plant. I staked it up so nothing could hurt it, and the second year it grew to about 14 inches in height and bloomed some, but I never saw a single bee near it. That stalk was in a fence-corner in the best of soil. This spring there is not a plant to be found in that vicinity.

Last spring I gave it another trial, sowing some with oats on good, mellow ground; some along a spring run (on its banks, where there was washt ground,) but so far I have been unable to find a single plant, and I came to the conclusion that I could get along very well without sweet clover.

I had a very curious experience with a colony of my bees this spring. Along the first of June I opened hive No. 38 to see how they were getting along. Well, I found two capt queen-cells and some not yet capt. Thinking they were about ready to swarm, I closed the hive and gave orders to watch for a swarm the next day from No. 38. The next day came, but the swarm did not. The second day and no swarm. So I waited five days and not an (external) sign of a swarm. Then I opened the hive again, and on the first frame I found a ball of bees. Says I to myself: "You are going to supersede your queen, and are killing your mother." So thinks I, "I'll save her"—a young tested queen one year old. I caught hold of her wing, and, to my astonishment, it was a young queen instead of the old one. Then the other frames were examined and the old queen was found to be all right.

The virgin that had been balled hatcht out of one of the cells that were found capt on the first examination. A few days later another virgin was found dead in front of that hive. Now, why did they allow those cells to hatch if they did not want any of the queens? The weather was warm and fair at that time. Or, why did they not swarm?

Paul Whitebread.

Luzerne Co., Pa., June 22.

Be It Known

To all Men, we are prepared to fill orders promptly for

CHOICE QUEENS of the best strains of Golden or Leather-Colored Italians....

Tested $1.00: Untested—one. 75c; three, $1.50. After July 1, 50c each. Remit by Express Money Order, payable at Barnum, Wis. One and two-cent stamps taken. Address,

Van Allen & Williams,
25Atf BARNUM, WIS.

ONE MAN WITH THE UNION COMBINATION SAW

Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery Sold on Trial. Catalogue Free.

SENECA FALLS MFG. CO.,
46 Water St SENECA FALLS, N. Y

Two Special Offers.

As explained in former ads., publishers can afford to put forth extra efforts in securing *new* subscribers; as the majority remain, once they become subscribers to a *good* journal. It is from this point of view that I make the following offers:

Offer No. 1.

To any one not a subscriber to the Review who will send me $3.00, I will send the Review one year and 1,000 strictly firstclass, snow-white one-piece Sections. After accepting this offer if any one wishes to buy more sections, I will furnish them at the following prices: 1,000, $2.75; 2,000 for $5.25; 3,000 for $7.50; 5,000 for $12 00. Sections will be shipt from any of the following points: Flint, Mich.; Chicago, Ill.; Medina, O.; Jamestown, N.Y.; Higginsville, Mo., or Omaha, Neb.

Offer No. 2.

To any one not a subscriber to the Review who will send me $1.50, I will send the Review one year and a fine, TESTED Italian Queen. Purchasers may have either the bright, golden strain, or the dark leather-colored reared from imported mothers. After accepting this offer, if any one wishes more queens, they will be furnisht at the following prices: Single queen, 90 cts.; 3 for $2.65; 6 for $5.00; 12 or more at 75c each. Orders will be filled in rotation, and safe arrival guaranteed.

If you are not acquainted with the Review, and wish to see it before subscribing, send 10 cents for three late but different issues, and the 10 cents may apply on any subscription sent in during 1898. W. Z. HUTCHINSON,
FLINT, MICH.

The Nickel Plate Road

will sell excursion tickets to Chautauqua Lake and return on July 8, at one fare for the round trip, with return limit of 30 days from date of sale by depositing tickets with Secretary of Chautauqua Assembly. Tickets good on any of our through express trains. Cheap rates to many other points East. Communicate with this office, 111 Adams St., Chicago, for any further information desired. Van Buren Street Passenger Station, Chicago. Tel. Main 3389. (41-26-2

The Foul Brood Inspector.

On page 332 I askt Mr. Lovesy, of Utah, why Utah's bee-keepers can't guard themselves against foul brood as well as an inspector? In reply I am askt how the bee-keepers could interfere with the bees of any person without an inspector who shall visit every apiary in his district at least once a year to eradicate all foul brood and kindred disease.

Mr. L. says whether this is satisfactory to me or not he fails to see anything so very monstrous in this law. Don't be mistaken. I want to encourage and protect the bee-industry, like you, but we differ in the means. I want a law against all that's foul—not foul brood only; but I don't want so many inspectors. There are more officers than bee-hives already; decrease them and increase the bee-hives—that makes less burden and more honey, and therefore it is better.

About foul brood, every bee-keeper can learn as much as an inspector. Let each one learn by distributing good periodicals like the American Bee Journal; teach him to observe, and to act, and by law compel him to restrain from every harm towards the community. By creating inspectors you make everybody pay for a few neglectful persons. Make these persons pay for their neglect—that's enough.

If you have fire on your place *you* will have to guard, and not an inspector; and if you do harm to your neighbors you must bear the consequences. Every person is cautioned under the penalties of law to watch his apiary, that disastrous thing called foul brood, that destroys so many colonies only by neglect. This is a correct way to protect the bee-industry.

An inspector visiting every hive at least once a year is a monstrous thing. I am going to show you it is. You know small-pox, cattle-fever, hog-cholera, and San Jose scale are things as bad as a mad dog. Have you an inspector visiting at least once every year your family to find out if there is small-pox, or visiting your stables to find out about cattle-fever, visiting your hog-pens to find out about cholera; visiting your orchard to find out about the pernicious scale, or visiting your dog about his madness? Oh, no! If you would need an inspector for this you would better have no children, no cows, no hogs, no fruit-trees, and no dog. If you need an inspector for foul brood you would better have no bees. That inspector can't help you among so many—help yourself! This is and ought to be the first axiom. The inspector might visit you one week, and the disease the next, therefore such an inspection without a good education is monstrous. Anyhow, Utah's foul brood law can be dissatisfactory only for those who are taxt for it. In this respect I don't care for it as I would'nt care for it if there would be a face in Utah with an unusually long-pointed nose. But if the man with that nose would say: "There is a nose finer than any nose in Wisconsin;" then he must allow being told, "Your nose is very satisfactory, but you could do with half an inch less."

You criticised Wisconsin's foul brood law and called yours better because it provides an inspector for every district. Now, let me tell you, you might do better yet. Put an inspector on every bee-hive. That's probably an advantage over Wisconsin. But I think all these inspections could be done with half an inch less. J. VOLKERT.

Chesterfield Co., Va.

[Mr. Volkert's ideas may be very good in theory, but they are quite impractical at the present time. It is one thing to say that all bee-keepers should be as well-informed on the subject of foul brood and its treatment as is Mr. McEvoy, the foul brood inspector of Ontario, Canada, but it would be quite another matter to do the educating or get the rank and file to take the interest in it that they should. We must take things as we find them, and then gradually improve them, but not try to do the impossible at first.—EDITOR.]

* * *

A Young Bee-Keepers' Experience.

I have but 5 colonies now, numbered 1, 2 3, 4, 5—1 and 5 in 10-frame hives, and 2, 3 and 4 in 8-frame. No. 5 is a swarm that came out May 28. No. 4 was a last year's late swarm; 1, 2 and 3 are 2 years old.

Last year my bees did no good. I had 5 colonies, and got only about 75 pounds of honey, and one swarm; and all the bee-men say that the bees would not work last year on the little white clover, while we had a very good crop of it; consequently there had to be a great deal of failing.

This year the prospect was better at the start, but got nipt in the bud. In March we had very fine weather, and the brood-combs were well-filled with brood, but there were few bees. In April we had some very cold weather, and the bees could not protect the young bees and larvæ, consequently it died in the cell except in the strong colonies. The weak ones have not yet recovered from the setback.

Another thing I do not understand: I have sat at my hives for two hours at a time watching for drones, and have taken out all the frames, and I do not think I have seen a half dozen drones in my apiary. June 22 I weighed my bees, and No. 1 was 45 pounds net, or deducting the weight of the hive; No. 2, 15 pounds; No. 3, 11 pounds; No. 4, 24; and No. 5, only 25 days old, weighed 56 pounds net, or 88 pounds gross; this is over 2¼ pounds per day gain of honey, and yet none of my bees are working in the supers yet.

"A Queenly Deceiver."

"He fools his customers by sending more than is expected."—See page 105. current volume Bee Journal. and ask for the free pamphlet referred to. I am now prepared to fill orders promptly with FINE YELLOW-TO-THE-TIP **QUEENS**, or daughters of imported stock mated to golden drones. at 75c each. Purely-mated Queens reared from the best stock and by the best method known, is what I furnish, and will prove it to all who give me a chance. Money Order Office, Warrenton.

Address, **W. H. PRIDGEN.**
22Atf Creek, Warren County, N. C.
Please mention Bee Journal when writing.

Queens, Bees and Bee-Keepers' Supplies

Tested Queens in April and May, $1.00. Untested, 75c. Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

F. A. CROWELL,
8Atf GRANGER, MINN.
Please mention Bee Journal when writing.

WATCH POUDER'S AD

SEE THAT WINK!

Bee-Supplies! ROOT'S GOODS at Root's Prices.

Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Cat-tree. **Walter S. Pouder,**
512 Mass. Ave.,
INDIANAPOLIS, INDIANA.
Please mention Bee Journal when writing.

QUEENS Italian stock. Untested. 70c each; 3 for $2.00 After July 1, 50 cents each; tested, $1.00 each. **Root's Goods at Root's Prices.** Prompt shipment and satisfaction guaranteed. Catalog free.

THEODORE BENDER,
20Atf **Canton, Ohio.**
Please mention Bee Journal when writing.

THE PLACE
TO GET YOUR
QUEENS

Is of H. G. QUIRIN, of Bellevue, Ohio.

Ten years' experience with the best of methods and breeders enables him to furnish the best of Queens—Golden Italian—Doolittle's strain—warranted purely mated, 75c each; 6 for $4. After June. 50c; 6 for $2.75. Leather Colored same price. Safe arrival. Will run 1,200 Nuclei, so there will be no waiting for your Queens. 23A16t
Please mention Bee Journal when writing.

READY TO MAIL

My 40-page Catalog of my Specialties, and **Root's Goods at their prices.** I carry a full line of BEE-KEEPERS' SUPPLIES, and can ship promptly. Catalog Free.

GEO. E. HILTON, Fremont, Mich.
Please mention Bee Journal when writing.

The RURAL CALIFORNIAN

Tells all about Bees in California.

The Yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by and expert bee-man. Besides this, the paper also tells you all about **California Agriculture and Horticulture.** $1.00 per Year; Six Months, 50 cents. Sample Copies 10 cents.

THE RURAL CALIFORNIAN,
218 N. Main St., - LOS ANGELES, CALIF.
Please mention Bee Journal when writing.

One Fare for the Round Trip

To Buffalo, N. Y., and return, account Baptist Young People's Union meeting, July 14-17. Rates lower than via other lines. For full information call on or address J. Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone 3389 Main. (30

I gave them all good, clean supers, with new sections and starters. They all seem to be very busy, working nicely, but are neither swarming nor putting honey into the supers.

I am young in the bee-business, and I am going to experiment some on those two weak colonies. If I lose them it will not be much loss, and if I gain it will be so much ahead.

I was told by old bee-men that I could not rear bees on sugar, but all the same I did. I caught a nice swarm some years ago in August, about the 20th, and on the first of November they had about 3 pounds of honey and about a half gallon of bees. I fed them sugar, about 25 pounds, during the fall and spring, and the same colony gave me in return for my kindness 24 pounds of section honey, and 2 good swarms, the next year.

On page 369, is given cold water vs. hot for bee-stings. A few years ago I undertook to capture a runaway swarm of bees, and did capture them. I got the bees to settle all right, but when I went to hive them it seemed to me they just all let go of the cluster and began to sting me. I did not put on any protection, and I was stung all over the hands, arms, legs, face and neck, and then they were not satisfied, but they crawled down my back and stung my body. In trying to get away from them I got one hand in the mud, and it seemed to ease me, so that I just plastered myself with a thin mud, of clay and water, and there was scarcely any swelling, and it did not make me the least bit sick or sore. Since then this is the only remedy I have for bee-stings. S. R. GUSEMAN.

Preston Co., W. Va., June 26.

* * *

Rendering Combs in Iron Kettles.

I send you sample of wax which has been boiled in an iron kettle, and I will tell the best I can how it was made. I first put the combs into the kettle and then put wire-cloth over them and weighed them down to keep them in the bottom of the kettle, and then filled it with soft water. I do not boil any after all the combs are melted. I took a dipping-board and dipt the wax out of the kettle while hot, the same as dipping for foundation sheets. Allowing wax to cool in the kettle will darken it.

REUBEN PALMER.

Jefferson Co., Mo.

[The sample of sheeted wax has a beautiful golden color, and is quite clean and nice. From all that has been said against rendering combs in iron kettles, one would hardly believe that the sample sent was so rendered. But it may be all the trouble comes from allowing the wax to cool in the kettle, and thus darken it. —EDITOR.]

* * *

Basswood the Only Hope.

Bees have not done much since locust bloom, when they commenced working in the supers. White clover is in bloom, but not as profusely as last year, and I think bees do not gather so much honey from it as last year. We can only hope yet for basswood, which is going to bloom soon. August Buchhagen.

Jefferson Co., Ohio, June 27.

Everything Looks Favorable.

My 350 colonies of bees are in fine condition, working now on white clover. Basswood will begin to bloom about July 1. At present everything looks favorable for a large honey crop. A. G. Wilson.

Vernon Co., Wis., June 27.

Please Send Us the Names of your neighbors who keep bees, and we will send them sample copies of the Bee Journal. Then please call upon them and get them to subscribe with you, and secure some of the premiums we offer.

Basswood Honey FOR SALE

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that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

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26Atf HENRY ALLEY, Wenham, Mass.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, June 18.—Not any new honey here, and the old stock is about exhausted. Market values about as last quoted for what little is being done. R. A. Burnett & Co.

Kansas City, June 21.—We have several shipments of new comb honey from Florida, the first to our market this season. The demand is fair at 11 to 12c. The demand for extracted will be light until September.
C. C. Clemons & Co.

New York, June 20.—Comb honey: We closed out all of our old crop some time ago. We have received several lots of new crop from the South, good, No. 1 white, which sells readily at 11c per pound.

Extracted: Receipts of new crop from the South are large. We quote: Common, 48 to 50c a gallon; good, 52 to 55c a gallon; choice, 5 to 5½c pound. Demand is good, especially for the better grades Beeswax remains firm at 28 to 29c. Hildreth Bros. & Segelken.

Cincinnati, June 9.—Demand is slow for all kinds of honey, especially comb. Prices for best white comb honey, 10 to 13 cents. Extracted honey brings 3½ to 6c, according to quality. Beeswax in good demand at 25 to 28c for good to choice ye low.
Chas. F. Muth & Son.

Boston, June 9.—Fancy white in cartons, 13c.; A No. 1 white in glass-froot cases, 11 to 12c.; No. 1, 10 to 11c; No. 2, 8 to 9c. Extracted, white, 6 to 7c; light amber, 5 to 6c. Beeswax, pure, in good demand with very light supply, 30c.

At the present time the demand for both comb and extracted honey is very light with but little stock on hand.
Blake, Scott & Lee.

Cleveland, June 9.—Fancy white, 12 to 12½c.; No. 1, 11c.; No. 1 amber, 9 to 10c.; buckwheat, 8c. Extracted, white, 6c.; amber, 4 to 5c. A. B. Williams & Co.

San Francisco, June 8.—White comb, 8½ to 10c; amber, 6½ to 7½c. Extracted, white, 5½@6c.; light amber, 4¾ to 5¼c. Beeswax, 23@25c

Not much now coming forward from any quarter. Supplies will doubtless be light throughout the season, admitting of little other than small local trade. Former quotations remain in force, with tendency on best qualities to higher figures.

Detroit, June 9.—Fancy white honey is lower and now quoted at 11c. No. 1, 9@10c; fancy dark, 7@8c; No. 1 dark, 6@7c. Extracted, white, 5@6c; dark, 4@5c. Beeswax 27@28c.

There are no changes in quotations, and very little desirable honey left. Sales are so slow that it is difficult to quote. The poor lots are being pusht at what they will bring.
M. H. Hunt.

Minneapolis, June 9—Honey much more encouraging. Fancy white clover comb is selling here now at 10½@11½c. Not advisable to ship darker than amber. Extracted fancy white clover, 5½@6c; amber, 5c; dark, 4@4½c.

Outlook for honey much more encouraging.
S. H. Hall & Co.

Indianapolis, June 9.—Fancy white 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand. Walter S. Pouder.

Milwaukee, June 9.—Fancy 1-pound sections, 11@12c; A No. 1, 10@11 cents; No. 1 8@10c; amber, 8@8½c; dark, 7@7½c. White extracted in barrels and kegs, 5½@6c; amber, 5@5½c. Beeswax, 26@28c.

The demand for honey continues very good indeed, and values fairly sustained. While the best grades are most salable, the inferior grades meet attention, and the movements are quite satisfactory. A. V. Bishop & Co.

Buffalo, June 9.—There is a very good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. Batterson & Co.

St. Louis, June 10.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.
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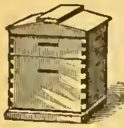

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38th Year. CHICAGO, ILL., JULY 14, 1898. No. 28.

CONTRIBUTED ARTICLES

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PROFITABLE BEE-KEEPING,

WITH

HINTS TO BEGINNERS,

BY

C. N. WHITE, OF ENGLAND.

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

No. 2. — BEES.

As it is necessary to the successful management of the apiary that the occupants of the hives, their ways, wants, and peculiarities should be understood, it is advisable that we should now give our attention to the bees.

In every colony of bees, whether it be located in a skep, the hollow of a tree, or in a modern hive, there will be found at some time of the year three kinds of bees—queen, drones, and workers. It is only, however, during the summer that the three kinds are found at the same time in any hive, for only when honey is being brought into the hive freely are drones brought into existence, or being in existence are allowed to remain alive.

THE QUEEN.

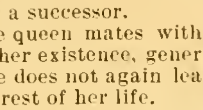
The queen, as the most important bee in the hive, first claims our attention. She is the egg-layer, and as such is the mother of the bees in the hive, whether they are workers, drones or queens. Only one queen is, under ordinary circumstances, found in a hive, but occasionally two—mother and daughter—are for a time living together. The queen's sole duty being to lay eggs, she has no other cares to claim her attention, in fact she does not even attend to her own food supply. The nourishment needed to keep up the extraordinary egg-laying power she possesses, is supplied by the worker-bees which are for the first fortnight of their existence what may be termed nurse-bees. If a comb be taken out of a movable-comb hive quietly, and without disturbing the bees, the queen may be seen surrounded by a cluster of workers. This interesting spectacle has given rise to the idea that the queen, as such, is in a position of authority, and is being attended by her respectful followers. This is far from the truth of the matter.

A queen has been known to lay more than her own weight in eggs in 24 hours; and as this work, and the taking and digesting of food could not be carried on by the queen, the latter important function is discharged by the workers—the nurse-bees—that are ever ready to supply her wants with food that has already undergone the necessary digestive processes in their bodies. Thus it is that the queen is enabled to do that enormous amount of egg-laying which we know she performs. The eggs that the queen lays are fertilized and unfertilized. The former, if placed in the small worker-cells, produce in 21 days a worker or immature female; or if placed in a queen-cell they produce a fully-developt queen in 16 days. Unfertilized eggs deposited in the drone-cells produce drones in 25 days.

The remarkable fact that the same egg may under altered circumstances produce either workers or drones proves of great value, for if the queen should be lost or killed during the summer while there are such eggs in the hive, the bees quickly set to work to produce from them queens. This they do by cutting down the cell walls around them, and giving the grubs a food greater in quantity and richer in nitrogen; that is, it contains a greater proportion of pollen than the ordinary bee-food.

The number of eggs laid daily varies with the season and the income of food; but even then depends almost entirely upon the quality of the queen. Early in the new year small patches of brood will be found in the very center, the warmest part of the hive, giving evidence that only a few eggs are laid daily. Subsequently, as prospects brighten the queen increases the number of eggs laid daily until, during the summer, when there is the greatest income of honey, and consequently the greatest inducement to the queen to put forth her energies, she lays over 2,000 eggs a day.

Her length of life depends upon surrounding circumstances. The bees themselves re-queen their hives when through feebleness or otherwise of the queen, they deem a a successor necessary. The bee-keeper who has a desire to make bee-keeping a really profitable occupation for spare hours, will see that the length of life of a queen is determined by her usefulness, which means that as soon as, from an egg-laying point of view, she becomes unprofitable, she must make way for a successor.



The queen mates with the drone, or male bee, only once during her existence, generally before she is a week old, and then she does not again leave the hive except with a swarm, for the rest of her life.

As the result in honey returns depends upon the strength of the colony at the commencement of the honey-flow, the bee-keeper must urge on the queen to lay eggs in greater number early in the season. By so doing he will obtain strong colonies earlier, but he will much quicker wear out the queens. It is generally believed that queens are at their best in their second season; therefore, queens bred in 1897 will be of the greatest service in 1898. Consequently all colonies should be headed as far as possible each year with queens in their second season.

THE DRONE.

The drones are the large, bulky and noisy humming bees that appear about April, earlier or later according to the season. When drones appear swarming-time is at hand. But no bee-keeper with an eye to profit will allow unlimited swarming; in fact, he will endeavor to prevent swarming altogether, nor will he allow the over-production of drones. The drones have apparently only one object in life, and short work is made of them by the workers at the close of the honey-flow, or when there is, through bad weather, a probability of stores running short. They are then turned out to die, so that the remaining part of the community may remain alive and continue the life of the colony. The length of life of the drones is very uncertain, but it really only extends through the season of plenty. The presence of drones in any hive after the honey-flow has closed, while those of other colonies have been massacred, is usually a sign of queenlessness. If a fertile queen be introduced, the bees quickly settle down to the work of turning out of the hive the drones that are then left.

THE WORKER.

Workers, the smallest of the three kinds of bees found in the hive, are, as their name indicates, the bees that do the work of the hive. They act as nurse-bees in preparing and administering food to the queen and grubs; then they gather honey and pollen, secrete wax, build combs, and carry on all the other little duties that fall to workers in such a well-arranged hive of industry, until worn out, as they usually are at the end of a few weeks' work. If it were not that the life of a worker-bee was short, there would be enormous populations, far beyond the capacity of modern hives. The length of life of a worker-bee is determined by the amount of work it performs. Those brought into existence, say in May, have before them a period of the greatest activity, and consequently their lives are short, only six weeks at the most; while those hatcht in September, having little work to do, may get through the winter, only to be quickly worn out with the hard work that then falls to their lot. The average length of life of a worker-bee is said to be 46 days. Quite recently a noted American bee-keeper, who has been carefully testing the matter, finds the average length of life to be 47 days. This shows that those who gave the former number evidently gave considerable and painstaking attention to the solving of such an interesting question.

LAYING WORKERS.

Occasionally when a queen is lost or killed a worker develops the power of egg-laying, but the eggs only produce drones. The presence of a laying worker is known by the irregular manner in which the eggs are deposited, and later on by the bulky and protruding cappings which are the characteristic covering of drone-brood.

As laying workers are not only useless, but a nuisance in an apiary, they should be got rid of as soon as their presence in the hive is known. The introduction of a fertile queen will have the desired effect, as bees do not tolerate a laying worker when they have a fertile or ordinary laying queen; or without the introduction of a queen, the hive may be freed of the laying worker by taking it some distance from its stand and shaking all the bees off the combs. A laying worker only being found in queenless colonies, the bees would be all adults, and would therefore at once fly to their own stand; but not so the laying worker, as it is supposed that she obtains this extraordinary power through having been bred near the queen-cells, and received some of the royal jelly. Be this as it may, this bee is not accustomed to flying abroad, and consequently will not return to the hive on the old stand; and if should endeavor to enter another hive it will at once be killed.

VARIETIES.

In addition to the well-known English bee there are other races that have been imported with a view to improving our own bee and establishing a better strain for general purposes. The foreign races that have most generally been imported are Ligurian, Carniolan and Cyprian.

The Ligurian, or Italian bee, is a handsome bee, having yellow bands across the abdomen, three being distinctly markt. In America many bee-masters have produced by selection and propogated a strain of Ligurian showing five yellow bands, but the majority of reports on this production are by no means in its favor. In England the Ligurian is favored, but tho the queens are more prolific than the English, and the bees better workers, this race can only be used for the production of extracted honey, as the workers cap the honey-cells so that the comb presents a damp and unattractive appearance.

The Carniolan, from southwest Austria, is a silver-banded bee, and in appearance most nearly approaches the English, but the queens are wonderfully prolific, and the bees good workers. Still, tho such bees on account of these two qualities, are apparently desirable, they are inveterate swarmers, a colony sending out sometimes swarm after swarm until it is only the size of a small cast itself. This swarming is a most undesirable trait, and one that bee-keepers are anxious to control; therefore, the keeping of this race has by no means become general.

The Cyprian is the handsomest bee known, being a little like an insect of gold. It is, as may be inferred from its name, imported from the island of Cyprus. I have had these bees in my apiary at a time when they were really golden bees, the price of the queens being 22s., but their stay with me was of short duration. At times they were as harmless as flies, and could be manipulated without either veil or smoke, but on other occasions they were veritable demons, and not to be subdued. At stinging, these bees can, in the words of "Brother Jonathan," "lick creation." Such vicious bees are best left alone, or, at any rate, by any but the most expert in bee-management. It is stated that one colony of Cyprians owned by an American bee-keeper stored in one season 1,000 pounds of honey. It is, however, certain that if the wonderful egg-laying power of the queen be properly directed, a truly immense population might be obtained for the honey-flow, and an abnormal quantity of honey stored. One colony of Cyprians, in my apiary several years ago, was expected to give over a hundred pounds of honey, but when it was taken to pieces (a task I never desire to repeat) only about a dozen pounds of honey were taken. The honey gathered by this colony had been used in feeding the grubs, and to such an extent was breeding carried that when this examination was made the 31 standard frames in the three stories of which the hive was composed, were almost entirely sheets of brood. Other colonies then had little brood, and many full supers.

The Syrian and other Eastern races bear much the same character as the Cyprian, and have found little favor in this country. If any imported race is introduced into any apiary, it should be pure specimens of either the Ligurian or Carniolan, but as an all-round bee our English bee is not to be beaten.

[Continued next week.]

Prevention of Swarming and Grass Growing.

BY MRS. EFFIE BROWN.

Of late we see a great deal in the bee-papers about prevention of swarming and hive ventilation. Every one seems interested in the subject from the "Marengo medicine man" to the beginner, and as so many are talking about it I will tell how I manage my bees. I am not quite certain, but I think the Roots follow the same plan, to some extent. Probably many others do also.

Five years ago I partially gave up comb honey producing and began extracting, and from that time until now I have had but very few swarms that I did not expect and want. My hives are all 10-frame, and nearly all have cleats. I agree with Dr. Miller on the cleat question, and even if they are going out-of-date, I like them better than those having hand-holes. I am also a very "strong 10-frame man." I would rather have a 12 than an 8 frame hive.

Our last important honey-flow is from buckwheat, and when this begins to fail I see that every hive contains at least 6 frames sealed to the bottom-bar. Of course there will be some honey in the center combs also, and the more the better; but if the required 6 is not in each hive, I exchange the partly-filled combs for full ones from an extracting story. By doing this I never have to feed in the spring, and the colonies all build up very rapidly.

When there is brood in 8 frames, I raise the 2 middle ones to the upper story and fill both up with extracting-combs. As soon as the combs begin to look "frosty," I either put on another story or extract. Some colonies are used to build comb, and these are sometimes tiered up to five stories.

When the bees begin to get interested in clover, I raise the cover of the hive about ¼ of an inch at the back end, and put a stick under so as to keep it so. The cloth over the frames is also taken away at the same time. About the middle of July I raise it up a good inch, and tho some may doubt it, I can say I have never had any trouble with robber-bees except in case of queenless colonies. This is better, I think, than raising the hive on blocks, for it insures a freer circulation of air. I wouldn't think of opening my front door for cool air without opening the back door also. I have an idea that the bees can ripen their honey faster with both "doors" open. I know that my kitchen floor, that has just been scrubbed, dries faster with the wind blowing through the room. Then with plenty of ventilation the bees never cluster outside unless I forget to leave the cover up, and, when I do, I can send them all in to work again by raising it and puffing a little smoke among them.

THE WEEDS AND GRASS THAT ANNOY.

When I began with bees the weeds and grass used to annoy me so that I felt like setting the hives on top of the house. All around our house the ground is so rich that angle-worms have come to stay, and every spring my chickens make such holes hunting for them that it is impossible to run a lawn-mower. If I put my hives on plowed ground the weeds would grow. Now, I can almost build a house with a hammer and a screw-driver (if it is all cut out like hives are), but I can't handle a scythe without running the point into the ground, so I just couldn't keep the stuff down myself, and my husband and the hired men were always afraid to go near a bee-hive unless I first went and blockt the entrance.

I tried sawdust and chip-dirt, but with the wind and chickens neither would stay. But like a great many other difficulties I have met I kept at it till, unlike the ghost, it did down. Mr. Brown happened, one spring, to get a lot of cheap cull lumber for making fences, and among it were a good many boards a foot wide and over, and all about 16 feet long. I took some of these and laid them down "three abreast" until I had a "sidewalk" as long as my bees would need, each hive set in a row about 18 inches apart. The front end of the alighting-board rested on the edge of the "sidewalk," and the back end was raised up and a block put under to make it level. When the grass began to come up between the cracks, I turned the boards over, turning it all down under. With one of my little boys (the children are not afraid of the bees) at the opposite end I could turn the boards all over in a little while.

I am still using these boards, not having found anything better. They give a strip the whole length of a row of hives, and over 3 feet wide entirely free from weeds and grass. They make a very good alighting-board, and in swarming-time the clipt queens from the comb-honey hives can be found very easily. Eau Claire Co., Wis.

⁂

Does All the Honey in a Foul-Broody Colony Contain the Disease-Germs?

BY HON. R. L. TAYLOR.

Two cases of foul brood were discovered during the season of 1896. These were treated as heretofore by putting the bees into clean hives furnisht with foundation, and the diseased hives with their combs disinfected with heat. The treatment was completely successful, as has uniformly been the case heretofore. The two all-important considerations in the operation are that the management be so careful and guarded that no bees from the diseased colony be driven to other colonies, and that no bees from healthy colonies be permitted to visit the combs of the diseased colony.

The reason upon which this caution is founded is that the germs of the disease are liable to be carried from the diseased colony to healthy ones in its honey—at least it is the supposition that there is such liability. We know certainly that robber-bees, when engaged in robbing a diseased colony, carry the infection to their own hive. We are certain also that honey extracted from combs which have contained the diseased larvæ convey the disease to colonies that use it. But to have this effect it is not necessary to suppose that every cell of honey contains germs, and when we consider how small a proportion of the larvæ are freshly affected with the disease at any one time, and that the progress of the disease in a colony is generally quite slow, it is rational to suppose that but a small proportion of the cells of honey contains the germs. There would perhaps be an exception to this if a strong colony became badly affected with the disease towards fall, say in August, when its hive was well filled with brood, and when a good flow of honey occurred in September, for, in that case, in the ordinary course of things, as the dead matter of the larvæ dried down, the cells containing it would be filled with honey. It would seem inevitable, then, that a large proportion of the cells of honey should contain floating germs so soon as sufficient time were given to allow the honey to soften the dried matter. After this the cells containing affected honey may be largely increast in numbers by the removal of the honey from cell to cell as in the spring when brood-rearing is resumed.

Cowan, in his celebrated work, laid it down as a scientific fact that the germs of foul brood were not to be found in the honey. This conclusion was not accepted in this country because it was found that practically at least it was not true. I doubt if Cowan himself would deny that the germs could be mingled with honey by the hand of man, and if they could then they also could in the ways I have hereinbefore indicated by the bees. With these exceptions was not Cowan correct?

This is a matter of considerable importance, because a true answer to the question would give us a pretty clear insight into the methods by which the disease in question may be disseminated. If Cowan is correct, with the limitations suggested, then the disease cannot be conveyed by germs floating in the air or carried about on the bodies of the bees, otherwise they must certainly be carried to the honey in open cells throughout the hive.

With these thoughts in mind I made an experiment with honey taken from one of the colonies operated on. The colony was quite badly affected, there being in the space occupied by the queen from one-fourth to one-third of the cells that contained dead brood. The honey was contained in the two outside combs of the upper section of the Heddon hive. The combs contained five or six pounds of honey, and had apparently never contained any brood. The honey was fed to a colony of moderate strength, and very short of stores, but actively engaged in the rearing of brood, by placing the combs in a story above the honey-board through which the bees came and carried the honey below until it was all gone, and evidently all, or nearly all, used in nourishing the growing larvæ.

In this experiment the thought was that if the honey contained the germs that fact would certainly be revealed by the appearance of the disease among the brood below, and that the continued absence of the disease would be pretty satisfactory evidence that *that* honey contained no germs, and, consequently, in so far as one experiment goes, that they are not carried about by the action of the air, nor upon the bodies of the bees. Several examinations were made of the colony during the latter part of the summer and early fall to discover the existence of foul brood, if such were the fact, but no trace of the disease was found.

If enough further experiments give the same results, a decided relief will often be experienced in dealing with the disease, as where there are considerable amounts of surplus honey above the honey-boards.

Continued observations have been made in the cases of two experiments which have been heretofore reported; one of these was the immediate introduction to a healthy colony of a queen taken from a colony so badly affected with foul brood as to be about worthless. Examinations the last season show that the colony to which the queen was introduced remained healthy, as had been anticipated from the fact that it had revealed no signs of disease the previous season. This seems to show pretty conclusively that a queen is not necessarily diseased herself, tho she has been for a long time in a badly diseased colony.

The other one was the case of a colony of which mention has been made several times heretofore, in which what to all appearance was foul brood showed itself without making apparent progress, disappearing altogether at times and reappearing again to the extent of a few cells only. During the last season it did not show itself in the colony at all. It would be of interest to know certainly whether this was a case of true foul brood, and if it reappears an effort will be made to have the point determined by a competent microscopist.—Review. Lapeer Co., Mich.

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Apis Dorsata and Bee-Improvement.

BY W. A. VARIAN.

There has been much said for and against the government going to the expense of arrangements for the introduction of Apis dorsata. It seems to me that the coming occupation of Manila and the Philipine Islands by the United States may prove a good chance in this matter. If any one will look at the maps and descriptions given in Alfred R. Wallace's "Island Faunas and Floras," it will be found that these islands have almost the whole fauna and flora of the East Indies, part of that of China and Japan—"temperate Asia"—and part of that of Australia and the Pacific, thus being about the richest in this respect of any place on the globe.

I think it almost certain that there will be among the volunteer troops going there (who are not, it seems, likely to be workt to death) bee-keepers enough to make a pretty strong committee, who, with very little aid in the shape of material from the agricultural department, if the great bee, or a closely allied variety, inhabits the region, can test them there, and if they prove adapted to hiving, introduce them. There will be such chances in natural history out there that each regiment should have its Scientific Society, and the boys, in those cases where they have time before leaving San Francisco, should buy and carry along a small library of the latest works on natural history and sciences. Garrison societies for special study of the particular branches can be afterwards formed when there.

IMPROVING OUR BEES.

There have been several methods and principles of selection for the improvement of the bee publisht since I began to read on the subject, but I do not think the simplest, most rapid and effective has been mentioned. That is, to requeen one-half of the apiary from the young queen of the best colony in the other half the year before, and repeat back. Each season is a double selection by the honey record of one-half of the apiary. Of course, it may be necessary to keep a few yellow out-cross queens in places where the wild stock is black.

Weld Co., Colo.

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A "Six-Year-Old" Tells Some Experiences.

BY OLIVER P. JOHNSON.

As I have had six years' experience as a local newspaper correspondent, with various other experiences, I will endeavor to "do a few" for the "tormentation" of the readers of the valuable Bee Journal. I am a natural-born lover of bees. I do not keep a very large apiary, just enough to be experimenting some in that line. My principal occupation is farming (tilling the soil), and as it is on the medium Iowa scale, one has not time to indulge very largely in apiculture.

When I was but a "kid" I would make daily visits to the old box-hives in my father's garden. Tho I was often advised to give them plenty of room, I would often venture too near and get a genuine reception, which, very often, would result as "Paddy O'Brien's Picnic."

But even this did not satisfy my desire. I continued to be inquisitive about the "critters," visiting the most learned bee-keepers near me, and asking all sorts of questions, some of which, no doubt, sounded very queer to them.

Through an immediate neighbor I received a copy of the Bee Journal, and thereupon subscribed for it, and the book "Bees and Honey," and since then I have learned many things in regard to bees, by reading them and everything else in that line that came to hand, and experimenting in their teachings.

I learned to do away with the box-hive by transferring to the movable-frame hive—one of my own make, which accidentally happened to be the same size as the original 8-frame Langstroth, but was so imperfect in its construction that it turned out to be a fraud, being more of an injury to the industry than anything else.

The hive I now use is the most substantial, and produces the best results of any that I have yet seen. It contains nine frames, and is both longer and deeper than the Langstroth. It is used and manufactured in the nearest apiary to me. I think that it was originated by one Beldin. The hive completed with foundation is worth $2.50 or $3.00. I thought it a little expensive for a novice, but have since discovered that the dearest is sometimes the cheapest.

A QUEEN-STINGING EXPERIENCE.

During the swarming season of 1897 an after-swarm issued, and desiring to return them Mr. B. O. Cook caught the queen and proceeded to press her to death with his thumb, whereupon the queen stung him in the hand, but it did not appear to be so severe as the sting of a worker. I mention this because I have read of some that claim queens will sting nothing but royalty, but perhaps the writer of the article I read accidentally inserted the word "queen," and really meant to say "drone!"

RHEUMATICS AND FORMIC ACID.

July 20, 1893, I was seized with a slight headache and other pains in all parts of my body. Thinking that I might feel relieved I went to the creek, took a bath, and came back completely exhausted. The next day found me no better—just able to be about.

The pain halted in my neck for a short time on the 23rd. In a week I was worse. I thought that I was getting the typhoid fever. I called the family physician, and after a careful examination he pronounced it acute rheumatism.

Pains would be in my neck, then in my shoulders; then a lively game of hide-and-go-seek about the hands and arms. The physician did me no good. Various patent medicines proved to be worthless. I heard that one might be cured by the sting of a bee, so I resolved to try. I would go to the hive-entrance and catch them and force them to sting me, but I could not feel the sting at all. Finally I gave it up.

Some days I would be bedfast. The affliction then would be in one knee until it had swollen as full as the skin would hold. It would then pass instantaneously to the other knee, the swelling gradually following.

I continued to love the bees, and when I was able I would be examining some of them. I had a very quiet swarm that "knew me," and I thought they wouldn't sting, so without veil or smoker I opened the hive, and, in so doing, accidentally prest one of them, which raised the scent usually accompanying the expulsion of formic acid. This enraged one of the "critters," which immediately rose up and proceded to drive its awl into my face. (It is needless to say that I felt it.)

The rheumatic pains were then in my feet. In less than ten minutes the pain of the sting was in my feet also. (My feet are very large, consequently they can contain lots of pain.) I was on my back in the middle of the floor, and, "suffering Isaac!" such pains as I did have in those feet! I might have died, but I had so much pain that I couldn't. I took nothing to counteract the sting, but just let it take its course. In three hours the pains had all left. I was a new man, and the happiest fellow to be seen.

I have not had a rheumatic pain since, and hope that I never shall have.

COURSE TAKEN BY AN ABSCONDING SWARM.

I saw an article in the Bee Journal on absconding swarms, and why they "go out west." This was a fact which I had always observed when swarms escaped from my father's garden—they invariably flew west. My present location is in the edge of a 200-acre linden grove that might well be clast as a forest, it being quite aged, and containing very many large trees, hundreds of which are hollow. West of me, two miles, is a very large oak grove. A neighbor joins farms with me on the west. He has quite a number of colonies, and I believe that from 20 to 50 swarms escape from there every year. I have seen very many of them go. He will not sell them, and I have never seen one swarm that left in any other direction than west, tho some claim that they occasionally do.

Cedar Co., Iowa.

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Rearing Early Queens—A Good Point.

BY C. P. DADANT.

I have received the following letter, with the request that I answer in the American Bee Journal:

> "In 'Langstroth Revised' we are told (page 513) that in April queenless colonies should be given a frame of young brood to rear a new queen. We are told in another place that queenless bees will most likely select a larva three days old from which to rear a queen. In that case the bees will have a new queen in about 13 days from the time the frame is given. Even if the queen should be reared from the egg, is it not likely that the bees will have a virgin queen long before there will be any drones in the apiary to mate with her? Is it not likely that before there will be any drones we shall have some pretty old virgin queens on hand? Will these old virgins make as good queens as those reared later? I found one or two queenless colonies and hesitated about giving frames of brood for reasons above indicated, preferring to send South for queens.—EDWIN BEVINS."

There is certainly a very good point raised by Mr. Bevins. We must say that in very early or sudden seasons we have found quite a little difficulty in rearing queens too soon. But this is not a rule. It is an exception. Generally spring opens slowly, with only occasional warm days and many a reverse. In the average season the best colonies will have drones ready to hatch by the time our queenless colonies can be prepared to hatch their queens.

Our drones should be reared in the best colonies, always. It seems to be an undisputed fact, accepted by all physiologists, that the characteristics of a race are best perpetuated through the male. If this be correct, our drones are of more importance than our queens. That is, we should take more pains to mate our queens with drones of a prolific mother than to rear these queens from a prolific queen. I know many of our bee-keepers will say that this is impossible since we cannot control the fertilization of the queen, but it is equally evident that we can to a very great extent encourage the production of drones in the best colonies, which are already—mark this—more prone to rear drones than the others, from the very fact of their strength and greater prolificness. We can also, and to a still greater extent, discourage the rearing of drones in indifferent or weak colonies, by removing the drone-comb and replacing it with worker-comb whenever opportunity offers. This point I have been fighting for, for a number of years, and I am glad to see that it has not all been in vain.

We have queenless colonies every spring, and also every spring we follow the instructions given in Langstroth, and usually succeed in rearing good queens in fully three-fourths of the cases. Yet we can say that we take particular pains to induce the rearing of early drones, which could be done by a little stimulative feeding of the selected colonies. If queen-rearing is contemplated to any extent during the year, it becomes almost indispensable to resort to stimulative feeding, for there are many seasons when the drones are killed by the bees of nearly all the hives only because the crop does not happen to come when expected by them. The present season is one of this sort, and the drones were nearly all killed late in May, in our apiaries.

To get bees from the South is certainly a very good method, and our Southern brethren are very reasonable in their prices, for they sell them at rates for which we do not think we could rear them profitably. Yet, an apiarist will often hesitate to spend three or four dollars to save several queenless colonies. Then it sometimes takes longer to get the queens, when ordering them early, than it will take to rear them in your apiary. No one but a novice will send an order for a queen in April with the expectation of receiving her by return mail in every instance.

If you feed up one or two strong colonies about April 1, they will have drones by May 1 to 10. Then you may begin your queen-rearing April 15 with but little fear of their being unable to find drones during the first two weeks of their life. Should a young queen get lost from having to take too many flights, the colony which reared her is much better prepared to rear another than a colony that would have been left all this time queenless. The only thing that renders a colony unfit to rear a queen is the presence of an old, barren queen, or of one or more laying workers. In either case, the bees seem to be satisfied that they have all they need, and it is a hopeless task to try to save them unless a number of fresh bees are added.

There is a method by which we can be sure of having early drones. It is to rear young queens from good stock and in full colonies late in October. Such queens do not become impregnated, because the drones are no longer alive, and by the end of winter they have become drone-layers. They are prolific, being young, and rear a hive full of drones. The only trouble is that they must be killed promptly and replaced or the colony would soon die. We had an experience of this kind very involuntarily one year—about 1870 or 1872—on six or seven colonies, the mother queens of which had been sold by us very late in the season. These young queens were all magnificent drone-layers the following spring, and gave us a very good opportunity of rearing a lot of queens. This is a method which it is hardly advisable to follow, however, and we would much prefer to trust to natural conditions for our supply of early drones. Hancock Co., Ill.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Alfalfa in Texas—Other Questions.

1. While talking to Mr. Davenport, of this county, a few days ago, I said that next year I intended to sow about 12 acres of alfalfa, and cut three acres early in the spring, in a short while three more, and so on, the last being cut when ripe would do for hay, and by the time it was cut the first three acres would be ready to bloom. Thus I would have continual bloom of alfalfa. But he (the barbarian) with ruthless hand hurled his missile at my air-castle, and it disappeared. He says that alfalfa yields very little honey in this climate. How about that?

2. I have 15 colonies of bees, six of which I transferred this spring, four are still in box-hives, and four, which I bought, in home-made, movable-frame hives. One of the latter which was very strong and active in early spring, is not doing well. About three weeks ago I examined it, and finding it almost full, I gave them a super. I examined this from time to time and never found a bee in it. A few days ago I took off the super and lookt into the brood-chamber, and it seems to me they are not as full as when I put the super on. While the other bees are working thickly in and out, these lie about the entrance and do nothing. I have never been able to find a queen in this or any other hive, so I don't know whether they are queenless or not? Is it probable?

3. In the early mornings I notice from one to five or six young bees, still white, dead in front of the hives. What is the cause? I notice no disagreeable smell as of foul brood.

4. I notice a great deal said in the Bee Journal about "preventing swarming." Now, not to show my ignorance but to get information, I would like to know what would be the effect on the bees if all queen-cells were kept pincht off at the time when it is desired that they do not swarm?

5. How does Alsike clover do in this climate? TEXAS.

ANSWERS.—1. If he has kept close watch of the matter his word is worth more than mine. I know that not long ago a report came—I think it was from west of here, perhaps Iowa—that alfalfa yielded no honey, and the only field of alfalfa I ever examined when in full bloom in my own county had not a bee on it.

2. It is very probable that they are queenless. If so, you will find no unsealed brood present, unless they have been queenless so long that laying workers have set up business, in which case you will find sealed brood in worker-cells that has not the usual flat sealing, but round, like little marbles close together.

3. It isn't foul brood, for in that case the brood is left in the cell and it isn't white. It may be drone brood that is thrown out because the bees don't want drones, or it may be from some other cause, but it need cause no uneasiness unless there is a good deal of it, in which case it may point to starvation. But if there's honey in the hive it isn't starvation.

4. It doesn't always work the same. Sometimes the bees will give up swarming if you destroy the queen-cells, but generally they will start others, and in some cases may swarm with only eggs in queen-cells, if indeed they have that much. If you don't die till you find out how to prevent swarming without in any way interfering with a good crop of comb honey, you'll probably be gathered to your fathers at a very ripe old age.

5. It probably does well, as I don't remember seeing any unfavorable reports from Texas.

Building Irregular Combs.

I wired all my brood-frames and used strips of foundation about an inch wide on the top-bars. I now find the bees are building comb about 2½ inches thick on one frame, and about one inch thick on the next, and so on alternately across the hive. Why is this, and is there any remedy for it? MINNESOTA.

ANSWER.—The only thing I can think of to account for such irregular work is the irregular spacing of the frames. If you have the foundation in the middle of each frame and have the frames all spaced at equal distances, it is hardly possible there will be any such trouble.

Feeding Back Extracted Honey.

1. We wish to buy some pure extracted honey, to feed back in order to get comb honey in one-pound sections. Will it pay us to do this?

2. What per cent. would the bees use in converting extracted honey into section comb honey? Or, how many pounds of finisht comb honey would the bees produce from 100 pounds of the fed extracted honey? VIRGINIA.

ANSWERS.—Very, very doubtful.

2. That depends. You might not get 10 pounds of comb honey from 100 of extracted, and you might get a good deal more. If you feed the 100 pounds of extracted to one colony you'll get a good deal more comb honey than if you feed it to five colonies. But whether you feed it to one or five, there seems to be a shrinkage that can hardly be accounted for. At a rough guess, from what I have read and from some little experimenting in that line, I should say that if you get 40 pounds of section honey by feeding 100 of extracted honey, you'll do well. I know that some claim they can do it at a profit, but I don't believe you or I could.

Use of the Division-Board—Hanging Out.

1. I have the dovetail hive and have put the division-board in the middle of the frames. Is that the right place for it? If not, where does it belong? and of what use is the division-board?

2. I caught a swarm about two weeks ago and put them into an 8-frame two-story Langstroth hive, and last Tuesday

the weather was very close and warm, and the bees came out and hung on the front of the hive in a large bunch. Did they do that on account of the hot weather, or on account of lack of room? ILLINOIS.

ANSWERS.—1. What you call a division-board isn't intended to be used as such, but as a dummy. It is to be used, not in the middle, but at one side. Put in all the frames, crowd them all close to one side, then put the dummy close up against the last frame. If the hive were made just wide enough to take in the frames, you would find it almost impossible to get out a frame after the bees have filled and glued them. But there will be a space between the dummy and the side of the hive which the bees will always leave clear. That gives play enough for the dummy so it can easily be taken out, and after the dummy is out there is plenty of play to get out the frames.

2. Very likely it was only because the weather was very hot and the hive close. You can easily find out whether they are crowded for room by taking out the combs and seeing whether the cells are all filled with honey that do not contain eggs or brood. If you raise the hive on four blocks about ¾-inch, it will give them enough air so they will not be likely to hang out.

The Best Hive—Number of Frames.

1. What make of hive is the best for bees?
2. What number of frames is the best, 8 or 10-frame?
3. What make of hive does Dr. Miller use? Are they 8-frame or 10 frame? IOWA.

ANSWERS.—1. Probably if the bees were consulted in the matter they would tell you that there is no better hive for bees than the old straw skep our forefathers used. But this has been displaced by the movable-frame hive, not because the frame hive is better for the bees, but because it is more convenient for the bee-keeper when he wants to take out the combs.

2. For extracted honey it is likely 10 Langstroth frames in a hive are best. For comb honey, if the bees are to be left without much attention the year round, likely 10 frames are also best. If they are used with two stories when supers are not on, perhaps eight frames to each story are best.

3. The majority of my hives are very old, and were originally 10-framers, afterward reduced in size to take 8 frames. As fast as I am changing into new hives I use 8-frame dovetailed hives, allowing the bees all the room they will use up to 16 frames, except when supers are on, when all are reduced to one story except a few for experiment. As yet I have only about 50 dovetails in use, but hope to close the season with a good many more.

Signs of Swarming—Hanging Out.

1. If a colony in a box-hive is about to swarm, will there be any particular signs by which I can tell?
2. What is the matter with some of my bees? They gather in large bunches and hang down in front of the hives the biggest part of the day, fanning with their wings; while others are busy they make a great noise at night. OHIO.

ANSWERS.—1. None that you can be sure of. They generally hang out, but sometimes they hang out with no thought of swarming. They work less actively, but neither is that a sure sign.

2. It may be they are preparing to swarm, or it may simply be that it's too hot in the hive and they prefer to stay where it's cooler. It may be that they are crowded for room. See that they have room enough, either in the hive or in supers, and raise the hives by blocks at the four corners, and they will not be likely to hang out very long.

Don't Work on White Clover or in Supers—Placing Hives.

1. Why did the bees not work on white clover in 1897, which is the best honey-pasture we have?
2. Why do my bees not work in the supers?
3. Why are there no drones this year?
4. Do you advise setting the hive on the ground when it can be done, or would you set it on a platform two or three feet high? WEST VIRGINIA.

ANSWERS.—1. I don't know. It happens some years in this locality (this is one of the years) when white clover blooms abundantly but bees don't store any honey from it. I don't know why. I only know that white clover is very plenty, but there seems to be no honey in it.

2. Very likely they haven't anything to put in the supers, or else there is room not yet filled in the brood-nest. They'll not commence work in the supers while there is plenty of room in the brood-nest. But you may hurry up matters by putting bait sections in the super, that is, sections that have been partly drawn out the previous year. Or, you may put a small piece of brood in the super.

3. If you watch closely you will probably find drones this year. There are plenty in my hives, but not as many as in some years, because the bees have been driving them out in the month of June and in the first of July, on account of the scarcity of honey.

4. I wouldn't do either, but set the hive on a stand somewhere from two to six inches high. That makes it better for bees to get into the hive than when it is two or three feet high, and you can sit on a seat to work at the hives.

Sowing Buckwheat—Hybrid Queen's Progeny.

1. What time should buckwheat be planted in Southern Mississippi to produce the most honey?
2. If a half-breed queen meets an Italian drone, what would the progeny be?
3. I had a trial with laying workers in one hive this spring. They refused to rear a queen; several times I gave them brood, but no queen-cells were built, so I gave them a black queen, as I did not care to risk an Italian, and sure enough they balled her to death. So I got a frame with two ripe queen-cells on it, and gave to them; 12 days later I found plenty of fresh eggs in regular form, so I closed the hive, and I see they are getting strong in bees. They were very ill-natured (?) until they reared a queen. MISSISSIPPI.

ANSWERS.—1. In the North, as early in July as possible, and I suspect the same time would be all right in Southern Mississippi.

2. Her worker progeny will be ¾ Italian blood, and her drone progeny the same blood as herself, only it must be added that, theoretically, her drone progeny will be slightly tinged by the blood of the drone with which she mates.

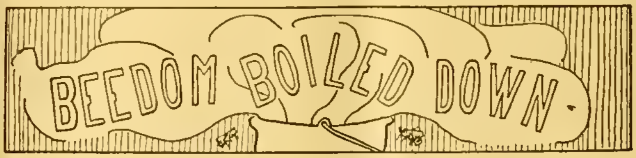
Drones and Egg-Fertilization.

1. Is the drone hatcht from an unfertilized egg?
2. After the queen meets the drone, is the process of fertilizing the egg at the pleasure of herself?

I discovered a superabundance of drones in one hive, and upon examination I found nothing but drone-eggs in it, hence the above questions. OHIO.

ANSWERS.—1. Some believe that the fertilization of the egg is at the will of the queen, and some believe her volition has nothing to do with it, but the kind of cell controls the matter.

2. You can hardly tell by looking at an egg whether it will produce a drone or a worker, but you can easily tell when the brood is sealed whether it is drone or worker, and that is probably what you mean. In your colony which had so many drones, the queen may have commenced laying without having been fertilized (a very unusual thing) and in that case would produce only drones; or she may have been a played-out queen, producing mainly or entirely drones, or there may have been no queen present and laying workers were at work.


BEEDOM BOILED DOWN.

Solder on Tin Packages.—Der Deutsche Imker aus Boehmen says tin is all right as a package for extracted honey, but all soldering must be on the outside and not on the inside.

Apis Dorsata.—Different writers speak of from three to seven varieties of native bees in India, but all seem agreed that Apis dorsata (mentioned in nearly every paper under a native name) cannot be domesticated on account of its intractable nature. Among other things—(1) It is said to be exceedingly vicious—often attacking men and beasts on the slightest provocation; (2) It preserves the same habits and appearance wherever its habitat; (3) Has never been known to build its nest under shelter, but mostly on the most isolated and lofty trees and overhanging rocks; (4) When they desert trees and combs of the season they frequently travel for a week or ten days, to distances over 100 miles, even crossing such mountains as the Uilgiris in their migration; (5) Build single combs; (6) Are used to approach from north, south, east and west; (7) Rarely remain in the same locality for more than three months at a time; and (8) Emigrate when flowers become scarce.—British Bee Journal.

* * *

Top Ventilation in hot weather is considered in Gleanings. One man proposes a special device for it. Dr. Miller believes six square inches of entrance at the bottom and six more at the top gives more ventilation than 24 inches all at the bottom, because the two entrances allow the air to pass *through* the hive. But bees are slow to seal sections if an opening is too close to the sections.

* * *

Wholesale Feeding.—W. H. Pridgen does it this way: Nail 3-inch strips to the edges and ends of an inch board. Tack strips across the bottom an inch apart, give the board a little incline, turn on a little sweetened water from a faucet in a barrel at the higher end, graduating the supply according to the demand, and when the bees all get to work make it the full strength of syrup wanted. A point that demands special attention is the manner of closing the work of feeding without starting robbing. Instead of simply stopping the supply, water is gradually added till there is so little sweet that the bees do not care for it.—Southland Queen.

* * *

Management of Pollen-Filled Combs.—G. M. Doolittle says he lives in a region where the bees probably store as much pollen as anywhere in the United States, but he has never melted a comb of pollen, and he wouldn't give a cent for a means of extracting it. He has never known bees to throw out pollen unless it was mouldy. His bees store an excess of pollen during hard maple bloom, and again during white clover. During hard maple when the pollen begins to crowd the queen, he moves the frame of pollen back from the brood-nest, putting between the brood and pollen a frame of honey. This stimulates the laying of the queen. When the hive is too full for this proceeding, he removes a frame of pollen for future use. After apple-bloom it is returned, the bees having used up their store.

The maple pollen has no honey stored over it, but white clover pollen has. Combs of the latter are stored away for the following spring, care being taken as to worms. Placed near the brood-nest in spring, it stimulates to laying better than the feeding of rye-meal or other substitutes.—Gleanings.

* * *

British View of Facing Honey.—W. Woodley, a valued contributor of the British Bee Journal, says he has been surprised at the "points" that have been brought forward in America in favor of facing, and gives his own views as follows:

"If all the sections are equal in quality throughout the crate, there is surely no harm in placing the sections best side out. Anyone with experience in working for comb honey knows that one side of a section is generally better or more evenly capt than the other side; and if the inside rows of sections are equal to the outside ones, no injustice is done, and no deception practiced. If, on the other hand, the outside row are superior as sections to the inside ones in the same crate, they are not a fair sample, and in my opinion there is fraudulent intention to deceive the purchaser on the part of the seller. Moreover, this method of doing business must in the long run recoil on the head of the man who practices it. I think that every bee-keeper who has honey to sell should take care that every section or jar of honey is equal to the sample, and sell those not up to the mark at a lower price, or at a fair value compared with the price charged for the first selection or quality."

* * *

Selling Honey to Grocers.—Like a good many others, G. K. Hubbard advises against the practice of crowding so much honey upon the markets of the large cities, seemingly preferring, however, those places that are some little distance from home. The large producers of California must of necessity ship to the large markets, but the smaller cities should be supplied by bee-keepers not far distant, without the grocers having it shipt from the wholesale cities.

Start with a load of 10 to 20 cases, according to the size of the place you are going to visit. Make a special point to be neat and gentlemanly in appearance—best suit, collar, necktie, boots blackt. Fix prices on different grades, and stick to them, treating all alike. Better miss a sale occasionally by sticking to price, as it will save time in the future. Be pleasant, polite, and make known your business at once; or, if the proprietor is busy, leave and come back again later. If a grocer doesn't seem ready to buy, don't press unpleasantly, but take leave pleasantly, promising to call some other time when he may be ready to buy. Don't start by offering to sell a single case, but offer to sell a number of cases, or the whole lot. It's easier to come down on the amount than to go up. If the grocer says he can get honey for less money from Blank City, call attention to freight, breakage, quality of honey, and also to the fact that you will take off his hands every section that is not just as represented, and that you will call again in 60 days or so and will pay him 10 cents each for the empty cases if in good condition.—Gleanings.

"Profitable Bee-Keeping, with Hints to Beginners"—the nine articles by Mr. C. N. White, of England, began last week in the Bee Journal. See page 442 for further information concerning these articles, and also the premium offers for getting new subscribers for the last six months of 1898.

We would like to have all our readers, if possible, get and send in the subscriptions of their neighbor bee-keepers. The way to get rid of slipshod, old-fogy bee-keepers is to place under them the jack-screw of good bee-literature and raise them up to the level of those who are striving to keep bees in the modern and proper way. By so doing all will be helpt.

Many of our subscribers have already sent in new subscribers on the offers made on page 442, but there is room for many more. Before Aug. 1 we hope to add 1,000 new subscribers to our list. It can be done if every one will do only half as well as some others have already done.

Send for free sample copies to work with, or send us the names of non-subscribers, and we will mail the sample copies to them.

Honey as Food is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey among should-be consumers. The forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 30 cents; 50 for 50 cents; 100 for $1.00; 250 for $2.00; 500 for $3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for $1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at $1.00), and 10 cents extra.

The Wood Binder for holding a year's numbers of American Bee Journal, we propose to mail, postpaid, to every subscriber who sends to us 20 cents. It is a very simple arrangement. Full printed directions accompany each Binder. Every reader should get it, and preserve the copies of the Bee Journal as fast as they are received. They are invaluable for reference, and at the low price of the Binder you can afford to get it yearly.

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

PUBLISHT WEEKLY BY
GEORGE W. YORK & COMPANY
118 Michigan Street, CHICAGO, ILL.

[Entered at the Post-Office at Chicago as Second-Class Mail Matter.]

UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

EXECUTIVE COMMITTEE—Pres., George W. York; Vice-Pres., W. Z. Hutchinson; Secretary, Dr. A. B. Mason, Station B, Toledo, Ohio.

BOARD OF DIRECTORS—E. R. Root; E. Whitcomb; E. T. Abbott; C. P. Dadant; W. Z. Hutchinson; Dr. C. C. Miller.

GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 38. JULY 14, 1898. NO. 28.

EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Bee-Supply Trade.—According to all reports the year 1898 has exceeded all others in the large demand for bee-keepers' supplies. All the factories seem to have been crowded to the utmost, and even then to have been away behind orders. But it is just possible that the honey season is not going to be as good as some anticipated, or as prospects indicated a month or two ago.

◆

The Omaha Convention will be a large affair if E. Whitcomb can have his way about it. And he usually "has his way." In a letter written to us July 2, he said:

"We rather hope to turn out 1,000 Nebraska bee-keepers at the meeting."

Why, Uncle Whitcomb! Think of it—1,000 Nebraskan bee-keepers at the next meeting of the Union! Why, we'll have to engage the whole Exposition grounds, and then have a regular bee-keepers' camp-meeting. All right. We'll get Presbyterian Dr. Miller to open with a song, Baptist Dr. Mason to follow with a prayer, Congregationalist A. I. Root to preach a sermonette, and Methodist Eugene Secor to follow with an exhortation, or give his 'sperience!

Talk about camp-meetings! Well, we should say so. But why not all the States go to work and try to see how many of their bee-keepers each can have in attendance? Illinois ought to have—well, we won't say just how many, but if Nebraska gets one-fifth of her proposed 1,000, Illinois can more than double it. And Iowa—how many, "Gen." Secor?

Let all begin to talk up the coming convention. Plan now to be there. Help to make it the crowning apiarian event of this closing wonderful nineteenth century. We will *try* to do our part, and we know Mr. Whitcomb and many others will do theirs.

It's now "O. O."—"On to Omaha!"

◆

The Illinois State Fair has greatly reduced the list of cash premiums offered in the department of Bees and Honey for the 45th annual Fair of 1898, to be held Sept. 26 to Oct. 1. The total amount offered for the whole Fair is $45,000, and of this amount only about $275 goes to apiarian exhibitors.

We take the following from the Premium List recently received:

LOT 193—BEES AND HONEY—OPEN TO THE WORLD.

The judges in this lot will be governed by the code of rules adopted by the Illinois State Bee-Keepers' Association.

Five hundred pounds will receive full score for quantity in displays of comb and extracted honey. Fifty pounds will receive full score for quantity in display of beeswax.

Display of comb honey	$25	$15	$5
Collection of labeled cases containing 12 or more pounds of white honey from different flowers	10	5	
Collection of labeled cases containing 12 or more pounds of amber or dark honey from different flowers	10	5	
Case white clover comb honey, 12 to 24 pounds	5	3	
Case basswood comb honey, 12 to 24 pounds	5	3	
Display of extracted honey	25	15	5
Display of samples of extracted honey, named	5	3	
Display of candied honey	15	10	
Display of beeswax	15	10	
One-frame observatory hive of dark Italian bees	5	3	
One-frame observatory hive of golden Italian bees	5	3	
One-frame observatory hive of Carniolan bees	5	3	
One-frame observatory hive of Albino bees	5	3	
One-frame observatory hive of Cyprian bees	5	3	
One-frame observatory hive of Holy Land bees	5	3	
One-frame observatory hive of black bees	5	3	
Group of queen-bees, comprising 2 dark Italians, 2 golden Italians, 1 Carniolan, 1 Albino, 1 Cyprian, 1 Holy Land, 1 black	10	5	
Display of honey-plants, prest, mounted and labeled	5	3	

The only reason we can imagine for dropping the special list of awards to the bee-keepers of this State is because of the few local bee-keepers who took enough interest in the Fair last year to make an exhibit. This was a mistake. The Fair officials were very generous toward bee-keeping last year, but of course when they found that their generosity was unappreciated, they decided to use the premium money in other departments. Perhaps by putting up a good show this year, another year bee-keepers may be able to recover what they have lost. We were hoping that the Illinois State Fair might continue at the head of all Fairs in its amount of cash premiums offered for apiarian exhibits.

◆

The Honey Season and Prices.—Editor E. R. Root in Gleanings for July 1 has this to say concerning the present season and the price of honey:

> Up to within a few days, at least, the honey season as reported over the country has been very indifferent, not to say poor. We have, up to within a day or two, received only a very few reports where honey was coming in to any extent; but these few report an extra honey-flow; but the localities are so scattered that, if no honey should come from now on, there will be a great scarcity of both comb and extracted honey; for in California the season has been almost a complete failure. I think I have never seen such immense areas of clover as I have this year; but for some reason or other it does not seem to "give down." Occasionally, here and there, there will be a few bees, but nothing like what we might expect if nectar were being secreted in the usual way. Our colonies at the home yard and at the basswood yard have been on the verge of starvation, and have had to be fed in order to keep brood-rearing going. Our neighbors report a similar condition with one exception, and to this exception I shall refer later on.
>
> But since June 26 I can report for this locality, at least,

a change for the better. Basswoods were never more promising than this year; and by the way the bees are roaring on the trees, and tumbling in at the entrances, it begins to make it look as if we *might* get our usual quota of honey. But the season has been so peculiar that we do not propose to count our chickens before they are hatcht. But as I sit here I can see great droves of bees flying past the window and over factory buildings; and our men in the yards tell us that it begins to look like business now.

In the last few days we have received some very encouraging reports. In some cases clover seemed to be the source, and others basswood. Rains have been frequent, and copious at times; and altho clover has been out some six weeks, there are still vast areas of it on the hills and pasture lands. Perhaps we shall have a second crop. An immense quantity of clover will go to seed this year, and this augurs well for next season's clover.

I have deferred the writing of this till the very last minute, so that I might be able to present to you as exact an idea of the situation as possible. Taking everything into consideration, honey ought not to sell as low as it did last season; for I am morally sure that there will be less of it; and do not be in a hurry to rush it off to the commision men, even if you do get a little crop. As the output will be limited, prices should rule higher.

White clover, at least in the northern and middle States, is the main dependence for honey; and even tho basswood may yield well, it is confined mainly to particular localities, and would not, therefore, greatly affect the general market.

No doubt Mr. Root is right in saying that the prices of honey this year should rule higher than last year. But will they? So far as we have noticed, the prices quoted by commission men are about the same as in 1897. We fear it will be a very difficult matter to raise prices. It is easy enough to come down, but when you try to raise prices it is a different matter.

Perhaps in the local or home markets it will be easier to get the price of honey up a little this year, and if bee-keepers will just hold back their honey a little from the city markets, it may help to raise the prices there, too.

◆

The United States Bee-Keepers' Union continues to grow. We have received a number of new memberships lately, and so has Secretary Mason, if we may judge from the following, dated June 30:

EDITOR YORK:—On the 25th I received a list of 17 names (with $17) from J. Webster Johnson, Secretary of the Salt River Valley Honey-Producers' Association, of Arizona, with the request that they be placed on the list of members of the United States Bee-Keepers' Union. Perhaps you'll remember that last year Mr. Johnson sent a list of 24 names of members of that Association. He writes now that some have already sent in their names, and others will send theirs later.

I don't know but we now have a thousand or more members, but I think as Editor Hill, of the American Bee-Keeper, writes me—that "we ought to have *ten* thousand."

A. B. MASON.

General-Manager Secor, writing us also June 30, said:

"We shall have a very respectable membership to report at the close of the year."

We have been hoping all the past year that in some way bee-keepers might become sufficiently interested in their own welfare to help roll up a membership of 1,000 by the time of the annual meeting at Omaha. It could be done so quickly and easily, if only the many who are abundantly able to send in their dues of $1.00 would only do so. Dues may be sent to the office of the American Bee Journal, to the Secretary, Dr. A. B. Mason, Sta. B, Toledo, Ohio, or to the General-Manager, Eugene Secor, Forest City, Iowa.

Now, we trust that every reader of the Bee Journal who can possibly spare the dollar, and who desires to have a part in an organization establisht solely in the interest of bee-keepers, will *at once* forward that dollar to one of the three places mentioned above, and receive a receipt therefor.

If any one, before becoming a member, desires to see a copy of the Union's constitution, write to Mr. Secor for it. He will be glad to send out any number of free copies, and then receive the membership fees as fast as the mails can carry them to him.

Why not roll up that 1,000 membership by the time of the Omaha meeting? Then our presidential successor could feel that a responsibility more than ten times greater rested upon his shoulders than came upon ours when we accepted the office at the Lincoln convention, nearly two years ago.

◆

Special Premiums at Omaha Exposition.—The following special premiums are offered in advertising by the Nebraska Farmer in the Apiary Department of the Trans-Mississippi and International Exposition:

1. Best, largest and most complete display of apiary goods and supplies	$10
2. Best and largest display covering the greatest number of varieties of comb honey, quality and marketable shape to be taken into consideration	5
3. Best and largest display covering the greatest number of varieties of extracted honey, quality and marketable shape to be taken into consideration	5
4. Largest and best display of designs of beeswax work	3
5. Largest and best display in unrefined beeswax	2
6. Largest and best display of bees and queens	3
7. Largest and best display of honey-producing plants, mounted and with their botanical and common names attacht	2
8. To the person giving the best exhibition on Trans-Mississippi Honey-Day of handling bees and extracting honey	5
9. To the State making the best display of honey, supplies, bees and queens on Trans-Mississippi Honey-Day	5
10. To the person making the best display of honey, supplies, bees and queens on Trans-Mississippi Honey-Day	5
11. Best and largest display of culinary products, in which honey is used instead of sugar	3

The above special premiums are opened to the world, and will not in any manner interfere with the awards to be given by the Exposition.

The bee-papers of the United States and Canada are requested to copy the above list of premiums.

THE WEEKLY BUDGET

MR. GEO. W. BRODBECK, of California, is shown in Gleanings for July 1, in a fine half-tone engraving. Rambler has been visiting him, and writes about Mr. B. and his apiary.

THE LEAHY MFG. CO. report business still good. For nearly six months previous to June 23 they had run their factory day and night.

MR. E. C. CAMPBELL, of Ontario, Canada, gave us a short call last week, when in Chicago visiting his son. Mr. Campbell has been for years Secretary of the Haldimand Bee-Keepers' Association, and quite an extensive bee-keeper. He is a publisher of a newspaper where he lives.

MR. A. I. ROOT is planning to take a trip through Yellowstone Park on his bicycle some time this month or next. He wants to get some others to go with him lest he become lonesome. Perhaps he fears getting lost if all alone! But when "A. I." is lost anywhere he'll be a good deal older than he is now. He has been around this country too long not to know "where he is at," no matter in what corner he finds himself.

MR. O. O. POPPLETON, now in Brevard Co., Fla., wrote us as follows July 2:

"I moved about two-thirds of my apiary up to this place, some 30 miles north of Stuart, Dade Co., early in June, to obtain the small amount of honey given by the black mangrove on the islands here. We are having a slow but steady yield, which looks like continuing a couple of weeks longer. If it does, I will get a crop of about 100 pounds average per colony for the year, which, altho small, is as good, if not better, than any season since the big freeze. I will return the bees home early in August.

"I am living with the Keeper of the House of Refuge, United States Life Saving Service, on the ocean beach. When not busy with the bees I can go bathing in the surf, fishing, hunting shells or turtle eggs. I have found four nests, about 500 eggs, since being here, besides turning one turtle that weighed over 200 pounds. I wish you could be here for a few days. I think I could show you many curiosities, and help you to a pleasant time."

Yes, Mr. Poppleton, we, too, wish that we could be with you awhile and rest up after one of the busiest summers of our life. But we must stay here and keep on grinding out the American Bee Journal week after week. We are glad you are having a pleasant time, and also getting something of a honey crop besides.

Mr. Thos. Wm. Cowan and wife have arrived at their home again across the Atlantic. In a letter dated June 27, Mr. Cowan says:

"We have now returned home after a very enjoyable journey and visit to bee-keeping friends......I send you a copy of the new edition of my 'British Bee-Keepers' Guide-Book,' just out, which will give you some idea of our methods of bee-keeping in this country."

We are glad to note the safe homeward voyage of our good English friends, and wish to thank Mr. Cowan for the copy of his book. It is what its name indicates—a bee-keeper's guide-book. It is in its 15th edition and 35th thousand; bound in cloth, gilt-lettered, and contains about 200 pages. Any of our readers desiring it, we can have their orders filled on receipt of 75 cents. The book is fully illustrated.

Mr. Cowan also has another book entitled, "The Honey-Bee: Its Natural History, Anatomy and Physiology." It is the most recent work on the subject, and the one used for all examinations of experts in England. The price is the same as the "Guide-Book." To any one desiring both books, we will have them mailed for $1.40. All orders may be sent to this office.

Mr. Porter A. M. Feathers is the somewhat long, tho apparently light and downy, name of a correspondent of the July Progressive Bee-Keeper. He starts off thus:

"Say, did you know the Progressive is a 'daisy?' Why, I did not know it until I subscribed for it......Really, there is no journal in my estimation which is any more full up to the brim with business and good, sound bee-advice than the Progressive."

The above testimonial will be valued more correctly perhaps when it is known that this same Feathers has for over two years owed us $2.25 on his subscription to the American Bee Journal previous to that time. He promist a year or so ago to pay up, but we presume he found it cheaper to subscribe for another bee-paper than to first fulfill his promise to us.

It might be a good plan for publishers of bee-papers to exchange lists of those who will take a paper for several years and then fail to pay for it. Mr. Newman, who publisht the American Bee Journal for some 18 years, had lists upon lists of bee-keepers who failed to pay their subscription, amounting to fully $10,000. During the six years since we have had the Bee Journal, we have accumulated several thousand dollars of what might be called bad subscription debts.

We cannot understand how any honest man will continue to take and read a paper and then refuse to pay for it.

We would be willing to unite with the other bee-papers in an agreement to send only to paid-in-advance subscribers. Dare the other papers agree to that?

The Names and Addresses of all your bee-friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums we are offering. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.

◆

Every Present Subscriber of the Bee Journal should be an agent for it, and get all other bee-keepers possible to subscribe for it. See premium offers on this page.

FOR THE READERS OF THE AMERICAN BEE JOURNAL.

PROFITABLE BEE-KEEPING,

—WITH—

HINTS TO BEGINNERS.......

By Mr. C. N. White, of England,

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

◆

Mr. White is owner of one of the largest apiaries in the country where he lives, and has made a life study of the subject. He is also lecturer, under the Technical Education Scheme, to several County Councils in England. He will treat the subject in a

Series of Nine Illustrated Articles:

1. General and Introductory.
2. Bees.
3. Handling Bees.
4. Swarming.
5. Hives.
6. Foundation.
7. Supering.
8. Diseases.
9. Wintering

This is a series of practical articles that bee-keepers of the United States will not want to miss reading. They will appear only in the American Bee Journal.

We want our present readers to begin at once to get their neighbor bee-keepers to subscribe for the Bee Journal for the last six months of 1898, and thus read the articles by Mr. White. In order that all may be able to take advantage of this rare opportunity to learn from a successful and practical English authority on bee-keeping, we will send the American Bee Journal for

**The balance of 1898 for only 40 cents—
To a NEW Subscriber—thus making it**

SIX MONTHS FOR ONLY FORTY CENTS—

Which can be sent in stamps or silver. If you are a subscriber already, show the offer to your bee-keeping neighbors, or get their subscriptions, and we will give you, for your trouble, your choice of one of the following list, for each new 40-cent subscriber you send:

For Sending ONE New 40-cent Subscriber:

1 Wood Binder for a Year's Bee Journals
2 Queen-Clipping Device
3 Handbook of Health—Dr. Foote
4 Poultry for Market—Fan. Field
5 Turkeys for Market—Fan Field
6 Our Poultry Doctor—Fan. Field
7 Capons and Caponizing—Field
8 Kendall's Horse-Book
9 Mullen's Horse Book
10 Foul Brood—by Dr. Howard
11 Silo and Silage—by Prof. Cook
12 Foul Brood Treatment — by Prof. Cheshire
13 Foul Brood—by A. R. Kohnke
14 Muth's Practical Hints to Bee-Keepers
15 20 "Honey as Food" Pamphlets
16 Rural Life

◆

For Sending TWO New 40-cent Subscribers:

1 Potato Culture—by T. B. Terry
2 Green's Four Books
3 Ropp's Commercial Calculator
4 Dr. Tinker's Bee-Keeping for Profit
5 40 "Honey as Food" Pamphlets
6 Winter Problem in Bee-Keeping—by Pierce
7 Hutchinson's "Advanced Bee-Culture
8 Dr Brown's "Bee-Keeping for Beginners"
9 Bienen-Kultur—German
10 Bees and Honey—160 pages—by Newman
11 People's Atlas of the World

◆

Please remember that all the above premiums are offered **only** to those who are now subscribers, and who will send in new ones. A new subscriber at 40 cents cannot also claim a premium.

Now, let every one go to work, and help roll up the largest list of subscribers the old American Bee Journal ever had. It can easily be done if all who possibly can get a few new subscribers will kindly do so.

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

Be It Known

To all Men, we are prepared to fill orders promptly for

CHOICE QUEENS of the best strains of **Golden or Leather-Colored Italians....**

Tested $1.00: Untested—one, 75c; three, $1.50. After July 1, 50c each. Remit by Express Money Order, payable at Barnum, Wis. One and two-cent stamps taken. Address,

Van Allen & Williams,
25Atf **BARNUM, WIS.**
Please mention Bee Journal when writing.

BEES! Florida Italian QUEENS!

Tested Queens, $1.00 each; Untested, 50c. Prompt and satisfactory dealing.

Address, **E. L. CARRINGTON,**
11Atf De Funiak Springs, Fla.

Bee-Hives, Sections, Shipping-Cases—everything used by bee-keepers. Orders filled promptly. Send for catalog MINNESOTA BEE-KEEPERS' SUPPLY MFG. CO., Nicollet Island, Minneapolis, Minn.
Please mention Bee Journal when writing.

ITALIAN BEES AND QUEENS FOR SALE...

Queens, $1.00; after August, 50 cents. Mrs. A. A. Simpson, Swarts, Pa. 27A6t
Please mention Bee Journal when writing.

ONE MAN WITH THE UNION COMBINATION SAW

Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery Sold on Trial. Catalogue Free.

SENECA FALLS MFG. CO.,
46 Water St SENECA FALLS, N. Y
Please mention Bee Journal when writing.

Basswood Honey FOR SALE

We have a limited number of barrels of **very best Basswood** Extracted Honey, weighing NET about 280 lbs. which we are offering at 6 cents per lb. f. o. b. Chicago. Do you want a barrel or so of it? If so, address, with the cash,

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

ONE CENT

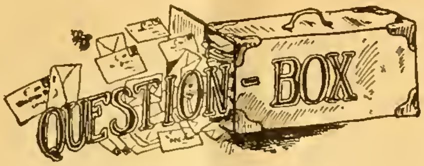
Anyone Interested in Agricultural Pursuits can't afford to be without the **AGRICULTURAL EPITOMIST.** Sample copy FREE to ANY ADDRESS upon receipt of name and address plainly written on postal card naming paper in which you saw this ad. Address AGRICULTURAL EPITOMIST, Indianapolis, Indiana.
26E26t Please mention the Bee Journal.

By Return Mail.
Queens.

Strictly 5-band or Golden Beauties. Untested, 50 cents. Tested, $1.00.
25A8t TERRAL BROS., Lampasas, Texas.
Please mention Bee Journal when writing.

For Meeting Baptist Young People's Union,

At Buffalo, N.Y., July 14-17, the Nickel Plate Road will sell tickets at rates lower than via other lines. The accommodations are strictly first-class in every particular, and it will be to your advantage to communicate with the General Agent, 111 Adams Street, Chicago, before purchasing your ticket. Telephone Main 3389. (28)



QUESTION-BOX

In the multitude of counsellors there is safety.—Prov. 11-14.

Average Cash Value of Taxable Colonies.

Query 76.—In Iowa 10 colonies of bees in the hands of any one owner are exempt from taxation, and the cash value of all his other colonies, as given by him, is divided by four, and the quotient becomes their assest value. If a similar law was in force in your State, what is the average cash value you would place on each of your taxable colonies?—Iowa.

Eugene Secor—$4.

R. L. Taylor—$2.50.

Mrs. L. Harrison—$6.

Chas. Dadant & Son—$2 to $3.

O. O. Poppleton—Not less than $5.

J. M. Hambaugh—About 75 cents.

Dr. A. B. Mason—$6 in my locality.

W. G. Larrabee—About $5 per colony.

Mrs. M. J. Null—50 cents per colony.

Prof. A. J. Cook—I suppose $5 would be about correct.

G. M. Doolittle—No; bees are not assest in these parts.

Dr. J. P. H. Brown—I would place the cash value, on an average, at $6.

Dr. C. C. Miller—It would hardly make any difference on the market value.

E. S. Lovesy—$4, for the reason that I would not sell at even those figures.

P. H. Elwood—We could not replace our bees in our hives and furniture for less than $6.

E. France—Under those conditions I would put them in at the price that they would sell for.

R. C. Aikin—$3 or $4. Taxes here amount to about 3 to 5 cents a colony; valuation *about* $1.

Emerson T. Abbott—I should leave that to the men who fix value. Most people pay as little tax as they can.

Rev. M. Mahin—If by "cash value" you mean the amount for which they could be sold, $5 would be the highest limit.

Jas. A. Stone—If the colonies were heavy, I would say the first of May when values are assest—$3 for blacks, and $5 for Italians.

J. E. Pond—Circumstances would determine the matter, but in this State (Massachusetts) bees are worth in March, as an average, assuming they are in good condition, $5 or more per colony, including a plain 8 or 10 frame Langstroth hive.

C. H. Dibbern—The cash value placed on personal property of various kinds by most assessors is very low. My bees are taxt at $1 per hive, which would make the cash valuation $4, but I consider them worth at least $5 just before swarming, when usually assest.

J. A. Green—As I understand the question, the details of the law have nothing to do with it. The question is, "What is the cash value of a colony of bees at the time of assessment?" As this would depend on locality, kind of

Sweet Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Sweet Clover (white).	.60	$1.00	$2.25	$4.00
Alsike Clover........	.70	1.25	3.00	5.75
White Clover...	.80	1.40	3.00	5.00
Alfalfa Clover........	.60	1.00	2.25	4.00
Crimson Clover.......	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.
Your orders are solicited.

GEORGE W. YORK & Co.
CHICAGO, ILL.

Young Tested Italian Queens For 75c each.....

I have a fine lot of them, and can fill orders **promptly.** Address,

F. F. MORROW, Wallaceburg, Ark.
24Atf Please mention the Bee Journal.

Muth's HONEY-EXTRACTOR Square Glass Jars.

Root's Goods at Root's Prices.

Bee-Keepers' Supplies in general, etc etc, Send for our new catalog.
Practical Hints" will be mailed for 10c. in stamps. Apply to—

Chas. F. Muth & Son, Cincinnati, Ohio.
Please mention Bee Journal when writing.

Golden Italian Queens Cheap!

Two-frame Nucleus, with Queen, $2.25.
If you want **BEES FOR BUSINESS,** send for my Catalog of prices. . . . .
18Etf J. F. MICHAEL, Greenville, Ohio.
Please mention Bee Journal when writing.

If you want the BEST... **Honey Extractor**

Get Williams' Automatic Reversible, And You Have It. Address,

VAN ALLEN & WILLIAMS,
10Etf **Barnum, Wisconsin.**
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QUEENS Pure Italian—3 or 5-banded. Untested, 50c each. Parties wanting ½ dozen or dozen lots will do well in writing for wholesale prices. I have 700. Can send by return mail. **DANIEL WURTH,**
28E3t Falmouth, Rush Co., Ind.
Please mention Bee Journal when writing.

Southern Home of the Honey-Bee

Will continue to rear none but the **BEST QUEENS.** Untested, 50 cents; Tested, $1.00.

GEO. W. HUFSTEDLER, Prop.,
President of National Queen-Breeders' Union,
24Atf **Beeville, Texas.**
Please mention Bee Journal when writing.

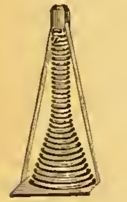
The Nickel Plate Road

will sell excursion tickets to Chautauqua Lake and return on July 29 at one fare for the round trip, with return limit of 30 days from date of sale by depositing tickets with Secretary of Chautauqua Assembly. Tickets good on any of our through express trains. Cheap rates to many other points East. Communicate with this office, 111 Adams St., Chicago, for any further information desired. Van Buren Street Passenger Station, Chicago (on the loop.) Telephone Main 3389. (44-28-3)

DR. PEIRO,

CENTRAL MUSIC HALL, CHICAGO.

Please mention Bee Journal when writing.



Queen-Clipping Device Free

The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 30 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

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BEES, HONEY, MONEY

Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

J. P. H. BROWN, Augusta, Ga.

OUR PRICES are worth looking at. We are making the new

Champion Chaff-Hive

with dovetailed body and supers, and a full line of other Supplies, and we are selling them CHEAP. A postal sent for a price-list may save you $$$$

R. H. SCHMIDT & CO.,
Box 187 SHEBOYGAN, WIS.

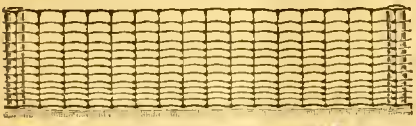
☞ IF YOU WANT THE

——BEE-BOOK

That covers the whole Apicultural Field more completely than any other published. send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keeper's Guide.

Liberal Discounts to the Trade.



Remember the Main

thing in buying wire fence is to get one which will stand the test. The only **twelve years old standby** is built by the

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

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50c ✻ Tested Queens ✻ 50c

For the next 30 days I will sell Tested Queens reared from the best Italian stock at

50c each—or $5.50 per dozen.

Untested, 40c.—or 3 for $1.00. Safe arrival.

W. J. FOREHAND, Fort Deposit, Alabama.

28A3t Please mention the Bee Journal.

First Excursion of the Season to Buffalo

Via Nickel Plate Road, July 14-17, at one fare for the round trip. Choice of water or rail between Cleveland and Buffalo within final limit of ticket. For further information call on or address J. Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone Main 3389. (31)

bees, kind of hives, etc., the cash value might run anywheres from $2 to $10. In this locality I should consider a fair average value $5, tho at a forced sale they would not bring that.

G. W. Demaree—The only solution to a proposition like this would be to value them according to your best judgment. My bees—if taxable property—under our general statutes, which is not the case now, are worth more some years than others, owing to the outlook. Simply exercise your best judgment—and be satisfied.

D. W. Heise—The questioner does not say at what season of the year the assessment is to be taken, or whether the value of the hive is to be included in the estimates. As my hives are worth $2, I would at this season (May) place an average cash value of $5 upon my colonies. Their value will fluctuate with the different seasons of the year, as well as one year with another.

GENERAL ITEMS

Late Crop Expected.

Bees here are in good condition. I have had five swarms to date. I will not get much comb honey until the flow in August and September, as there is no white clover here this season, and the excessive rains here will insure a good crop of fall honey, if the weather should be favorable. A. WORTMAN.

White Co., Ind., June 27.

◆

Clover and Basswood a Failure.

There is no nectar in the clover, and the basswood is a failure. Unless we get a flow from heart's-ease and Spanish-needle, the bees will have to be fed or starve. My 1897 crop of honey was 2,500 pounds from 24 colonies, spring count, all sold in the home market at 10 cents for extracted and 12½ cents for comb. C. L. BOWEN.

Ray Co., Mo., June 28.

◆

No Surplus or Swarming.

My bees have built up splendidly this spring. I had supers on during white clover and basswood; both are now passing out, but no surplus from either. I don't know why it is thus.

Bees have not swarmed with me—only two swarms to date; and the bees continue to kill the drones up to this time.

I started in the spring with 57 colonies. My winter loss was 15, by queenlessness and uniting in the fall.

D. A. CADWALLADER.

Randolph Co., Ill., July 4.

◆

Improved Tin Section-Cleaner.

I have improved the tin section-cleaner so much, and noticing that Mr. A. F. Foote has tried one, I will describe my latest.

I turned the roller to a diameter of 1½ inches; this I covered with T tins running parallel with the shaft, thus making alleys from end to end to catch the stuff that drives through. I now punch the tin with a thin chisel-punch ⅛-inch wide, running the work in rows diagonally across the sheet of tin, always holding the chisel so as to make

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The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated $2.00 per annum. Sample Copy Free.

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330 Market St., - SAN FRANCISCO, CAL.

PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey,

Being the cleanest is usually worked the quickest of any Foundation made

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y.

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FREE FOR A MONTH.

If you are interested in sheep in any way you cannot afford to be without the best and only weekly sheep paper published in the United States.

WOOL MARKETS AND SHEEP ✤ ✤ ✤

has a hobby which is the sheep breeder and his industry, first foremost and all the time. Are you interested? Write to-day.

Wool Markets & Sheep, - - Chicago

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BEE-KEEPERS! Let me send you my 64-page Catalog for 1898

J. M. Jenkins, Wetumpka, Ala.

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COMB FOUNDATION Wholesale and Retail.

Working Wax into Foundation for CASH **A Specialty.**

Hives, Sections, and a full line of Supplies. The **best** of everything. Write for Catalog, with prices, and samples of Foundation and Sections.

BEESWAX always wanted for cash or trade.

GUS DITTMER,
AUGUSTA, WIS.

Please mention Bee Journal when writing.

Cash PAID FOR Beeswax

For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 25 cents per pound, CASH. No commission. Now if you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

GEO. W. YORK & CO.
118 Michigan st., CHICAGO, ILL.

Texas Queens

Best honey-gathering strain in America. Untested, 75c. Write for a Circular.

J. D. GIVENS, Lisbon, Tex.

7A26t Please mention the Bee Journal.

July 29

the Nickel Plate road will run an excursion to Chautauqua Lake at one fare for the round trip. Write to J. Y. Calahan, 111 Adams St., Chicago, for particulars. Telephone Main 3389. 42-28-3)

the long way of the holes parallel with the roller. With a strip of wood in one of the alleys to nail the tin to, the roller is covered, and when properly put on and filed, sand-paper can't approach it for smooth, fine polish.

We produce honey in beeway sections, so I made the main sheet just 4 inches long, and raised the T tins at the ends ⅛-inch, put on a strip of tin with one row punched with the chisel, then with platform and two guides just 4¼ inches apart, I clean the beeways. I believe anyone who will try this will abandon sand-paper in any form.

There are two things essential to success—a perfectly round roller after the tin is on, and even, regular work in punching the tin. JOHN S. BRUCE.

Montrose Co., Colo. June 28.

Yellow Sweet Clover.

The plant that Mr. Hall, of Hardin Co., Iowa, sends, is yellow melilot or sweet clover, and has all the good honey-producing qualities of the common white sweet clover. It is a much rarer plant here in the West, only found occasionally, but more common eastward. It bears the euphonious botanical name of *Melilotus officinalis*. The first part of the word "melilotus"—"mel"—attests its honey value. It is a plant well worth cultivation by bee-men, if you are not troubled with the bugaboo notion that it will become a weed, as some claim for its near relation the *Melilotus alba*, or common sweet clover. H. S. PEPOON.

Beard-Tongue or Foxglove.

I enclose two samples of flowers which I think belong to the same family. The larger one is more abundant and is a fine honey-yielder. It began blooming about May 30, and somewhat resembles snapdragon, but the mouth of the flower is open, and the color is light blue.

FRANK ADELBERT.

Flathead Co., Mont.

[The two plants sent by Mr. Adelbert are members of the great figwort family that furnishes many fine honey-plants. The plants in question are known botanically as *Pentstemon*, and in common language "beard-tongue," or occasionally "foxglove." There are a great many different kinds found in the United States, and they are particularly numerous in the far Northwest—Montana, Idaho, Oregon, etc. Doubtless all the varieties are good honey-plants, as the family to which they belong furnishes many that are of much use to the bee-keeper. The common figwort, especially, is rich in honey, and is one of the plants figured by Prof. Cook in his Manual, and praised by him for its value as a nectar-producer.—H. S. PEPOON.]

Facing Honey—Gathering Slowly.

MR. EDITOR:—I am glad that it occurred to you to get the opinions of the commission men on the subject of facing comb honey. These opinions are just what might have been expected, and will be of value to honey-producers. It is quite possible for a man to face his honey without the intention to deceive, but that some one will be deceived is more than probable, and the honey-producer ought not to take the risk.

Bees are gathering slowly now, and I have put the second super on a few of the strongest colonies. During the first half of June almost all colonies got very short of stores, and many were on the point of starvation. White clover bloom is scantier than I ever observed it to be before at this time of year, but there is a great abundance of white clover plants.

Last week was quite a hot week and some swarming took place, but I am not looking for much of it this season. There was a heavy rain Saturday afternoon and night, and I look for a steady but not very abundant flow of honey.

EDWIN BEVINS.

Decatur Co., Iowa, July 4.

White Clover Prospects Blighted.

As the rain is again pouring, and all prospects for white clover honey now laid in the dust, I think this report will not come amiss, as those more fortunate bee-keepers may quiet themselves accordingly, and hold their crops for good prices. I have gathered information from a number of bee-keepers as to the white clover crop, and so far not an ounce has been stored in the supers. We have at this date 250 colonies in fine condition, and the clover never lookt better, but no honey. The number of colonies that I report from is about 500. We are now looking for basswood, and if it fails, then we have not white honey-yielding flowers enough to make a surplus, unless it be the willow-herb, which, if it yields, makes very white honey.

AUGUST BARTZ.

Chippewa Co., Wis., June 30.

Prospects Good for a Honey Crop.

I have 40 colonies of Italian bees in Langstroth and dovetail hives, all doing well. The prospect for a good honey crop has never been better. The white clover crop is good, and a heavy honey-dew falls every night; when morning comes the leaves on the timber are covered with honey-dew. The bees get honey from this in quantities. We are having a fine farming season—a good prospect for a good crop. A good farming season is generally a good honey season. What causes the honey-dew?

M. W. MCPHERSON.

Giles Co., Va., June 30.

Too Much Rain.

The honey crop will be light here this season. There has been too much rain.

JACOB FRAME.

Braxton Co., W. Va., July 5.

A Gratifying Depression.

A well known commercial authority in reviewing the liquor trade says: "Wine and liquor merchants think the times are out of joint. All sorts of liquor they say, except perhaps beer, seem to have lost a large part of their charm for the public, and some fear is entertained that with New Englanders the days of convivial habits have gone never to return. The man who before the hard times began, some five years ago, slacked his thirst with brandy and soda in the company of a friend, to-day contents himself with a modest glass of beer alone, having learned during the period of depression that stimulants are not positively essential, and that hospitality

"A Queenly Deceiver."

"He fools his customers by sending more than is expected."—See page 105. current volume Bee Journal, and ask for the free pamphlet referred to. I am now prepared to fill orders promptly with FINE YELLOW-TO-THE-TIP **QUEENS**, or daughters of imported stock mated to golden drones, at 75c each. Purely-mated Queens reared from the best stock and by the best method known, is what I furnish, and will prove it to all who give me a chance. Money Order Office, Warrenton.

Address, **W. H. PRIDGEN.**
22Atf Creek, Warren County, N. C.
Please mention Bee Journal when writing.

Queens, Bees and Bee-Keepers' Supplies

Tested Queens in April and May, $1.00. Untested, 75c. Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

F. A. CROWELL,
8Atf GRANGER, MINN.
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"WATCH POUDER'S AD"

SEE THAT WINK!

Bee-Supplies! ROOT'S GOODS at Root's Prices.

Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Cat. free. **Walter S. Pouder,**
512 Mass. Ave.,
INDIANAPOLIS, INDIANA.
Please mention Bee Journal when writing.

QUEENS Italian stock. Untested, 70c each; 3 for $2 00 After July 1, 50 cents each; tested, $1.00 each. **Root's Goods at Root's Prices.** Prompt shipment and satisfaction guaranteed. Catalog free.

THEODORE BENDER,
20Atf **Canton, Ohio.**
Please mention Bee Journal when writing.

THE PLACE
TO GET YOUR
QUEENS
Is of H. G. QUIRIN, of Bellevue, Ohio.

Ten years' experience with the best of methods and breeders enables him to furnish the best of Queens—Golden Italian—Doolittle's strain—warranted purely mated, 75c each; 6 for $4. After June, 50c; 6 for $2.75. Leather Colored same price. Safe arrival. Will run 1,200 Nuclei, so there will be no waiting for your Queens. 23A16t
Please mention Bee Journal when writing.

READY TO MAIL

My 40-page Catalog of my Specialties, and **Root's Goods at their prices.** I carry a full line of BEE-KEEPERS' SUPPLIES, and can ship promptly. Catalog Free.

GEO. E. HILTON, Fremont, Mich.
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The RURAL CALIFORNIAN

Tells all about Bees in California.

The Yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by and expert bee-man. Besides this, the paper also tells you all about **California Agriculture and Horticulture.** $1.00 per Year; Six Months, 50 cents. Sample Copies 10 cents.

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One Fare for the Round Trip

To Buffalo, N. Y., and return, account Baptist Young People's Union meeting, July 14–17. Rates lower than via other lines. For full information call on or address J. Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone 3389 Main. (30

may be carried too far." Very few reports of stagnation in business can be read with satisfaction, but this is one of the few. We cannot help rejoicing over some of the things that are interfering with the prosperity of this business, viz.: liquors are "losing their charm," are "not essential," convivial habits "gone never to return." We hope to hear of continued depression in the market for the same good reasons, and wish both consumers and producers of liquors "a safer and honester trade."—National Stockman.

◆

Poor Honey-Flow.

It has been a poor honey-flow in this section of country this spring until last week, as it has been so very wet.

H. C. GORTON.

Bureau Co., Ill., July 4.

◆

Rain Lessens the Honey Crop.

I will begin marketing my honey this week, if it will only stop raining. I took off a few cases last week. We have had too much rain, and it is raining now. The honey crop will be cut in half by the rainy weather. J. D. GIVENS.

Dallas Co., Texas.

◆

A Report from Vermont.

I put into winter quarters 84 colonies, and 86 came out in the spring. I think this is the best report I have seen yet. I supposed one colony did not have a queen, which accounted for one; and I made a mistake of one in counting.

Spring opened up early, and has continued cold up to the present time, the thermometer registering from 40° to 80° this month. Bees have gained steadily now every day for a week. Yesterday and to-day were very good days. Prospects were never better, if the weather would continue good. Red raspberry bloom is in its prime. I counted 225 loaded bees that entered one hive in a minute, about 6 o'clock a.m.

I saw by the Bee Journal that the caterpillars were making sad havoc with the basswood in some places in Minnesota and Wisconsin, one and two years ago. I would like to have members of the bee-fraternity report through the Bee Journal if there was any place where they killed the trees, and whether they still continue their depredations, or are they gone? Some maples were killed by them in this State, and this County, last year. I rode past a sugar-orchard last week that lookt as if the fire had been over it. M. F. CRAM.

Orange Co., Vt., June 30.

Illinois.—The annual meeting of Northern Illinois Bee-Keepers' Association will be held at the Court House, in Freeport, Ill., Tuesday and Wednesday, August 16 and 17, 1898. All interested in bees are invited to attend.

B. KENNEDY, Sec., New Milford, Ill.

◆

Excursion to Chautauqua Lake

over Nickel Plate Road July 29 at one fare for the round trip. By depositing tickets with Secretary of Chautauqua Assembly, same are available for return passage within 30 days from date of sale. City ticket office, 111 Adams St., Chicago, Van Buren Street Passenger Station (on the loop.) Telephone Main 3389. (43-28-3)

BEE-BOOKS

SENT POSTPAID BY

George W. York & Co.,

Chicago, Ills.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, $1.00.

Langstroth on the Honey-Bee, revised by Dadant—This classic in bee-culture, has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages; bound in cloth.

Price, postpaid, $1.25.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof A. J Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages; bound in cloth and fully illustrated.

Price, postpaid, $1.25.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of Queen-Bees are reared in perfect accord with Nature's way. 176 pages, bound in cloth, and illustrated. Price, $1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopædia of 400 pages, describing everything pertaining to the care of the honey-bees. It contains 300 engravings. It was written especially for beginners Bound in cloth. Price, $1.25.

Advanced Bee-Culture, its Methods and Management, by W Z. Hutchinson.—The author of this work is too well known to need further description of his book. He is a practical and entertaining writer. You should read his book. 90 pages, bound in paper, and illustrated. Price, 50 cts.

Rational Bee-Keeping, by Dr. John Dzierzon —This is a translation of his latest German book on bee-culture. It has 350 pages; bound in paper covers, $1.00

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called BEES OF HONEY. 10 page pamphlet. Price, 40 cents.

Convention Hand-Book, for Bee-Keepers, by Thomas G. Newman.—It contains the parliamentary law and rules of order for Bee-Conventions—also Constitution and By-Laws, with subjects for discussion, etc. Cloth, gold-lettered. Price, 25 cts.

Practical Hints to Bee-Keepers — by CHAS. F. MUTH. Also contains a Foul Brood Cure and How to Winter Bees. 40 p.; 10 cts.

Why Eat Honey?—This Leaflet is intended for FREE distribution, to create a Local Market. 100 copies, by mail, 30 cts.: 500 for $1.25; 1000, $2.00.

How to Keep Honey and preserve its richness and flavor. Price same as Why Eat Honey.

Alsike Clover Leaflet.—Full directions for growing. 50 for 25 cts.; 100 for 40 cts.; 200, 70c.

Apiary Register, by Thos. G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00; for 100 colonies, $1.25.

Preparation of Honey for the Market, including the production and care of comb and extracted honey. A chapter from BEES AND HONEY. Price, 10 cents

Bee-Pasturage a Necessity.—This book suggests what and how to plant. It is a chapter from BEES AND HONEY. Price, 10 cents.

The Hive I Use, by G. M. Doolittle. It details his management of bees, and methods of producing comb honey. Price, 5 cents.

Dr. Howard's Book on Foul Brood. —Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cts.

Silo and Silage, by Prof. A. J. Cook.—It gives the method in operation at the Michigan Agricultural College. Price, 25 cts.

Winter Problem in Bee-Keeping, by G. R. Pierce. Result of 25 years' experience. 30 cts.

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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, July 7.—A little of the new crop is coming, and it sells at 11 to 12c for the best grades of white comb. No ambers at present on the market. Extracted is coming freely from the South, and a little from the West; white brings 5 to 7c; ambers, 5 to 6c. Beeswax, 27 to 30c.

We do not look for a settled price on honey before September; meantime the offerings and demand will be limited to immediate wants. R. A. BURNETT & CO.

Kansas City, July 9.—New comb, No. 1, white, 11@12c; amber, 10@11c. Extracted, white, 5@5½c; amber, 4@4½c. Beeswax, 22 to 25c.

Old stock of honey all cleaned up. Few shipments of new in market.
C. C. CLEMONS & CO.

New York, July 9.—Comb honey: We closed out all of our old crop some time ago. We have received several lots of new crop from the South, good. No. 1 white, which sells readily at 11c per pound.

Extracted: Receipts of new crop from the South are large. We quote: Common, 48 to 50c a gallon; good, 52 to 55c a gallon; choice, 5 to 5½c pound. Demand is good, especially for the better grades Beeswax remains firm at 28 to 29c. HILDRETH BROS. & SEGELKEN.

Cincinnati, July 9.—Demand is slow for all kinds of honey, especially comb. Prices for best white comb honey, 10 to 13 cents. Extracted honey brings 3½ to 6c, according to quality. Beeswax in good demand at 25 to 28c for good to choice yellow.
CHAS. F. MUTH & SON.

Boston, July 9.—Fancy white in cartons, 13c.; A No. 1 white in glass-front cases, 11 to 12c.; No. 1, 10 to 11c; No. 2, 8 to 9c. Extracted, white, 6 to 7c; light amber, 5 to 6c. Beeswax, pure, in good demand with very light supply, 30c.

At the present time the demand for both comb and extracted honey is very light with but little stock on hand.
BLAKE, SCOTT & LEE.

San Francisco, July 9.—White comb, 8½ to 10c; amber, 6½ to 7½c. Extracted, white, 5½@6c.; light amber, 4¾ to 5¼c. Beeswax, 23@25c

Small quantities of the new crop have been offered by sample, but nothing of consequence has been yet done in the same. There will be very little white sage honey this season, but a moderate amount from the alfalfa and tule districts. Values remain as previously noted.

Detroit, July 9.—Fancy white honey is lower and now quoted at 11c. No. 1, 9@10c; fancy dark, 7@8c; No. 1 dark, 6@7c. Extracted, white, 5@6c; dark, 4@5c. Beeswax 27@28c.

There are no changes in quotations, and very little desirable honey left. Sales are so slow that it is difficult to quote. The poor lots are being pusht at what they will bring.
M. H. HUNT.

Minneapolis, July 9—Honey much more encouraging. Fancy white clover comb is selling here now at 10½@11½c. Not advisable to ship darker than amber. Extracted fancy white clover, 5½@6c; amber, 5c; dark, 4@4½c.

Outlook for honey much more encouraging.
S. H. HALL & CO.

Indianapolis, July 9.—Fancy white honey 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand. WALTER S. POUDER.

Milwaukee, July 9.—Fancy 1-pound sections, 11@12c; A No. 1, 10@11 cents; No. 1 8@10c; amber, 8@8½c; dark, 7@7½c. White extracted in barrels and kegs, 5½@6c; amber, 5@5½c. Beeswax, 26@28c.

The demand for honey continues very good indeed, and values fairly sustained. While the best grades are most salable, the inferior grades meet attention, and the movements are quite satisfactory. A. V. BISHOP & CO.

Buffalo, July 9.—There is a very good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quito an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

St. Louis, July 9.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.
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38th Year. CHICAGO, ILL., JULY 21, 1898. No. 29.

CONTRIBUTED ARTICLES

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PROFITABLE BEE-KEEPING,

WITH

HINTS TO BEGINNERS,

BY

C. N. WHITE, OF ENGLAND.

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

No. 3.—HANDLING BEES.

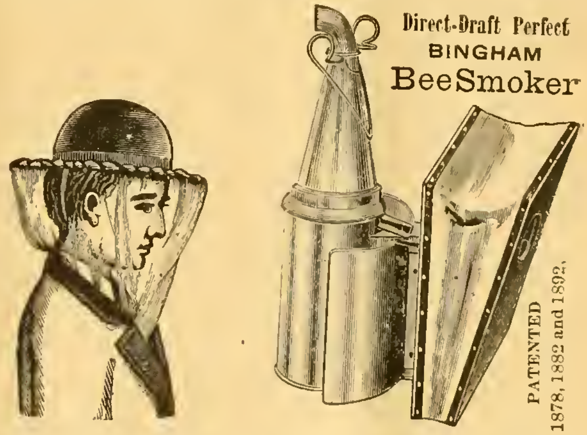
If it were not that the bee is so apt to use what Josh Billings appropriately terms its "business end" too freely, doubtless many more would embark in such an interesting and profitable hobby.

Tho bees are provided with a means of defense, which they sometimes use in the most provoking fashion, by a better knowledge of how and when to work in the apiary, stinging may be reduced to a minimum. It is no uncommon thing for a bee-keeper, who is by no means expert in bee-management, to examine his hives and take off full supers without a single sting. Bees differ in temperament as much as we do, some being almost as tame as flies, while others are quite the reverse. If any particular colony is found to contain bees that are in the habit of attacking one without provocation, they must be got rid of, not by destroying the whole colony, but by killing the queen and replacing her with another that is known to produce more amiable workers.

The spectacle of an expert at the various bee-exhibitions held in connection with the Agricultural or Horticultural shows, driving bees and handling them like so many flies, is familiar to most people who have taken any interest in this part of the show. But easy as it all seems to the onlooker, even at a show a different state of things sometimes prevails. Robbing, when more than one colony is used, or when bees are kept near by, may be commenced, particularly if the manipulations take place at the end of the season; and then, except for his skill in bee-management, the expert would fare little better than the novice.

It must not be supposed that colonies of bees can at all times be managed with the same ease as in a bee-tent; but by increast knowledge of bee-keeping, and particularly of what, to the bees, are disturbing influences, we shall know the proper methods to adopt under the varying conditions in which we may find the bees, and become able to conduct all ordinary manipulations without discomfort. Still, as there is neither hobby nor business that does not, along with pleasure, at times cause inconvenience, and it may be, pain, we must not expect to reap the great advantages of successful bee-keeping without an occasional sting. Quietness and confidence are most essential in managing an apiary; and neither can be obtained without practice. Any one who determines to succeed will do well to arrange with a friend or neighbor, or an expert if one is near, for a course of practical instruction in the ordinary work in an apiary workt for profit. The information obtained by such a course of practical instruction would doubtless prevent much waste and loss by experiments.

It is well-known that old bee-beepers often boast of their ability to hive swarms without protecting either face or hands. They may double up their sleeves, and better for them if they do, and hive the bees without a single sting being received; but that proves nothing in favor of the old, and nothing against the new system of bee-keeping. It must, however, be inferred by any casual observer of such performances that there are times when bees may be managed without much fear of the operator being stung. That is exactly what teachers of the modern system wish to become generally known, viz.: that if bees are only interfered with when they are in that amiable mood exhibited by them when swarming, bee-keeping will lose much of its terror. Previous to leaving the hive as a swarm, bees fill their honey-sacs, and it has been found that they will also do this when frightened. Now, tho it appears strange to talk of frightening bees, it is really an easy thing to do, for a little smoke driven into the hive-entrance has the desired effect. The bees at once rush off to their honey-cells and commence gorging, that is, filling their honey-sacs, and it is while they are thus busying themselves that combs may be examined. If any of the bees show any disposition to attack the operator, a little more smoke must be given, but it should be borne in mind that a large amount of smoke is harmful, and may not have the soothing influence desired. At all times when there are in the hive cells containing unsealed honey, an occasional puff from the smoker will be ample to subdue any even-tempered colony.



The proper time to open hives is in warm, sunny weather when the bees are working merrily. If they appear restless, and run about the alighting-board, there is, probably, a dearth of honey, and consequently manipulations are not advisable.

HOW TO PROCEED.

To be quite prepared for easy and thorough examination of any hive we must provide ourselves with veil and intimidant. The veil should be made of white mosquito net, with a front of black silk net. Round the top an elastic band should be run in a hem, so that it may be fastened around the hat, while the bottom of the veil is tucked inside the coat.

The intimidant, or frightener, may be smoke or carbolic acid; if smoke, it will be produced by burning coarse brown paper, fustian or rotten wood in the tube of a specially made "smoker." In preparing the smoker, the lighted end of the substance used should be put into the tube first; then upon the tube is fixt a funnel. At the bottom of the tube there is a hole: therefore, while the tube is in an upright position smoldering of the contents continues. To produce smoke in volumes, a small pair of bellows is fixt to the tube, the air being forced through the hole at the bottom. If the smoker is no longer required, the fire will go out by laying it in a horizontal position.

The fumes of carbolic acid are used either by saturating a sponge and placing it in the barrel of a smoker, or by dipping a cloth in a solution, and after wringing it dry, laying it up on the frames as the quilt is removed. The solution is prepared by putting 1½ ounces of Calvert's No. 5 carbolic acid and 1½ ounces of glycerine into an ordinary wine or spirit bottle, and shaking them until they unite. If then the bottle is filled with water a proper solution is obtained. If the glycerine is omitted, the contents must be well shaken before being used.

Having made all necessary preparations, first frighten the bees at the entrance, then remove the roof and lift and turn back the quilts from the outside frames. As they are being removed drive down the bees with a gentle puff of smoke along the tops of the frames. If the carbolic cloth is used it should be laid upon the frames as the quilts are removed. Almost at once the frames may be moved gently, and without jarring, so that the bees are not disturbed. If the hive is a tiering hive accommodating ten standard frames, the outside comb next to the operator should first be taken out of the hive so that the others may be removed with less inconvenience, and with less fear of crushing the bees. All examinations of the brood-chamber should be conducted with particular care, and as seldom as possible. By practice a thorough knowledge of the condition of each colony will be known: then from the time that supers are put on until the close of the season, it is seldom that further interference will be either necessary or desirable.

RE-HIVING SWARMS.

The method of hiving swarms into the straw-skep will be fully explained in a future article, but inasmuch as the skep should only be a temporary home, that is, until the evening of the day the swarm issued, how to get bees to change hives remains to be explained.

In the first place, the hive should be well painted and thoroughly dry. To get a swarm to take possession of a movable-comb hive is by no means a difficult matter, but the operation must be carefully conducted, otherwise among crusht bees may be the queen upon whose presence inside the hive success in hiving and afterwards depends.

First prepare the hive with frames, each containing a full sheet of foundation. But if the combs are to be evenly built in the center of the frames, the foundation must be wired into the frames, or only a few loose sheets be given when first hiving the swarm.

Starting with unwired frames, as the great majority of bee-keepers do, each sheet must be fixt in the saw-cut which runs through the middle and nearly from end to end of the top-bar. The foundation is quickly inserted by placing a small screw-driver in the middle of the saw-cut, and turning it around at right angles. While the sides of the bar are thus held apart the top of the sheet is placed between them and raised until it is level with the top of the bar. Being thus held, the screw-driver is removed, and the sides of the bar return towards their former position, thus holding the top of the sheet of foundation securely. The sheet thus hangs down from the top-bar. If then the hive is set perfectly level, the sheets of foundation will hang in the center of each frame.

Now in order to get these loose sheets of foundation properly and evenly built into combs in the center of the frames, the following rule must be observed: Place in the hive one more frame than the number of pounds the swarm weighs. For instance, if the swarm weighs four pounds give five frames. See that they are kept the proper distance apart by metal ends or other devices; then place at the side a plain board or dummy, so that the bees when in the hive will be kept compactly in the part occupied by the five frames. The bees should be confined to this number so that they will be compelled to spread out evenly on both sides of each sheet of foundation. Then being evenly balanced by the weight of bees on both side, the sheets hang in the center of the frames, and remain there until the bees have attacht them to the end-bars of the frames.

The following evening a slight examination of the frames may be made, but only by gently drawing them apart: then it must be only to see if any of the sheets have broken down. In a couple of days another sheet of foundation may be inserted between the outer frame and the next, and so on every three or four days, more or less according to the weather and the quantity of bees. By no means give more frames than they can well cover, but rather keep a moderate sized brood-nest, particularly if the swarm issues about the middle of the honey-flow. If the swarm be confined to six or seven frames, a small super may be given. Then, when the honey-flow is over, the super may be removed and the brood-nest enlarged by additional frames, but if breeding is to be continued, feeding will be necessary. Late swarms thus treated often give a nice super of honey, and are afterwards built up into magnificent colonies by Oct. 1, when all colonies should be closed up for the winter.

[Continued next week.]

Rendering Beeswax with the Solar Extractor.

BY O. O. POPPLETON.

On page 338 Mr. C. P. Dadant writes quite an article under the above caption, at the close of which he suggests that it might be well to give the subject a thorough examination.

My experience with purifying beeswax in the sun extractor has been exactly opposite to what Mr. Dadant's seems to have been. When I first read his article I was almost lost in amazement to understand how it was possible for two such experienced men as we are, to have had such directly different experience. A careful re-reading of what he wrote explains it, I think, and if I have misunderstood him he can set me right

The details of our extractors, as well as our methods of using them, must be quite different, he only getting from his the one result of melting the comb, while I get both melting and the best results in purifying the wax of any method I have ever tried. It seems that Mr. Dadant allows the wax, as it drips from the comb-pan in his extractor, to cool and harden as it drips. This works exactly as he explains in his second paragraph, and more or less dregs and dirt comes off and is mixt all through the wax, and remelting in the extractor is only doing over again the same process with the same results.

Mr. Dadant has fully explained in the next paragraph the method and principle of purifying wax by allowing it to remain for several hours at a temperature between its melting and the boiling points, giving a chance for all impurities to settle to the bottom. This is exactly what can be done in the sun extractor just as easy as not to do it, and I had no idea that any one was using an extractor any other way. All one has to do to secure this in an extractor is to have it made enough larger to allow the dish which receives the melted wax from the comb-pan to be in the sun under glass, which keeps it in a melted condition for hours.

The extractors I use are of a size to take glasses 30x40 inches in size. The comb-pans are made from 20x28 inch sheets of tin, thus allowing ample room inside of the extractor for both comb and melted wax pans to remain in the sun.

When the melted wax is in the right condition, that is, just before the sun sinks low enough so the wax commences to cool, I dip off the wax into molds, using oblong square-cornered bread-pans for molds, and a small flat-sided dipper. Empty square cans, such as those used for cocoa or corned beef, one-pound size, are good. With care, nearly all the wax can be dipt off in an absolutely pure condition, leaving all the dirt and a thin layer of wax. These last thin cakes of wax, with such dirt as adheres to them, are allowed to accumulate until there is enough to make a charge for the extractor, when they are re-melted and treated the same as were the original combs.

Of course, if one doesn't wish to take the trouble of dipping off the wax into molds, he can, after it has hardened, scrape off the adhering dirt, as suggested by Mr. Dadant, but I greatly prefer the dipping process.

In either rendering wax, otherwise than caps that contain more or less honey, or purifying any that has already been rendered, I use water in the wax dish, substantially as suggested by Alder Bros., except that it is unnecessary to heat either extractor or water before placing combs in it, as the same heat that melts the wax will heat the other things. I use about an inch of water in the wax dish for two purposes —to keep wax from sticking to the dish, and having water in the dish makes it much easier to dip off the melted wax.

In one of the numbers of Gleanings (Aug. 15, I think) in

1883 appears the original article describing solar wax extractors, which article was the starting-point of all the extractors now in use, east of the Rocky Mountains, at least. Attention was especially called to this point, of the advantages of these extractors for the purifying of wax. I was at first much puzzled to understand how such an able, practical man as Mr. Dadant could have overlookt this feature of the sun extractor, until I thought of the fact that his establishment is equipt with as good a steam-purifying apparatus as exists, and it is much easier for him to use this than to fuss any other way with small lots. To the ordinary bee-keepers, however, who are the real users of these extractors, my method of using them will, I think, be much the best.

Dade Co., Fla.

[Accompanying the foregoing article by Mr. Poppleton, was the request that a proof of it be forwarded to Mr. Dadant before publication, so that Mr. D.'s comments might appear in the same number with it. Here is what Mr. Dadant has to say further:—EDITOR.]

This article of Mr. Poppleton's is excellent, and I can add nothing to it except the advice to those who use solar extractors to follow the instructions he gives.

I will say, however, that in rendering up residues, as we do here, where the beeswax rendered has been water-damaged, and has carried with it the very lightest of the impurities, it is necessary to still purify it with water, as the water becomes loaded with much of the coloring-matter which would otherwise remain in the wax, and we can obtain a better result than from the sun melting alone.

Allow me here, if I have not done it before, to criticise our manufacturers of sun extractors who use *iron pans*. The iron discolors a great deal of beeswax before it becomes sufficiently coated with it to cease damaging it. We have been several times enabled to test this to our entire satisfaction. The rust darkens the wax, and no amount of sun melting would remove this stain. Water alone can help it.

C. P. DADANT.

Do Italian Bees Produce Better Honey?

BY A. W. HART.

Will you permit me to briefly review Mr. Bevins' "answer" (page 322) to my question on page 269? It seems to me only an unfair, unjust criticism, and no answer at all. I prefer to appear fairly before the bee-keepers on whom he is pleased to intimate I am "putting up a job." He says he hesitated considerable about answering, etc. He need have had no hesitation, trepidation, perturbation, or any other 'ation, from his own admission. My question, clearly, was not intended for him, and was "confined" to no one, but for those who were wise and could answer, and he said he was not one of these. He said he was not writing for distinction, etc., yet he must have been, for he said he was not one of the "wise"—did not answer my question, and at the last left it to others.

He does "not know how extensive Mr. Hart's reading has been." Of course he doesn't. Isn't expected to, and I presume the limit of a short bee-article is rather poor data from which to find out; but is there not a sort of covert intimation that he does not think it very extensive, or at least not so much so as his? for he proceeds to say: "This is the first time I have known any bee-keeper to intimate that the quality of the honey produced by the Italian bees was any way superior to that produced by other bees."

Again, he says: "I have never seen an opinion that the quality of the honey produced by any one race of bees was superior to that produced by the other races," etc. Now, I have seen just that opinion, and so have hundreds of the Bee Journal readers. He says: "Mr. Hart thinks the difference, etc., if there is any." Mr. Hart does not think there is a difference, did not intimate it, only intimated the only way he could account for it, and is a skeptic in that theory; hence the "question." Had Mr. B.'s reading been a little more extensive he would have "hesitated" a little longer before he called in question, criticised, and disparaged mine, for have I ever held the idea that bees *make* honey? It seems to me any fair, candid, careful reader could have seen my sentiments all the way through my "piece." I askt the question in good faith, because some do hold those ideas.

Mr. B. says: "He is giving undue deference to the opinions of some who do not know much about bees, yet can do considerable talking." Well, that's good. I wonder if some of the Bee Journal readers with whom I have compared notes will feel complimented when they are informed by Mr. B. that they can do considerable talking, but know little of bees. The only ones I have ever consulted with have been old, experienced, practical bee-keepers—some older than I am (and I have almost reacht "the allotted age of man")—clergymen, doctors, professors, scientific farmers, etc. I wonder if they will smile, for some of them read the Bee Journal.

He says I "came at them with another *if* which is entitled to no more consideration than the other," plainly implying that neither was entitled to any. Why, then, did Mr. B. go to the trouble, after so much hesitation, to notice either of the ifs, if it was not for distinction?

"Who is able to say the honey from red clover is any better than that from white," etc. Has any one compared? Now on this point there may be opinions and intimations Mr. B. has not read, tho they may be from men who can "do talking but know little about bees." As to his reference about the "ignorant" and "ought to be ashamed," etc., I will pass by—there is no point.

It was from the opinions and statements exprest on pages 133 and 134 that I was led to ask my question. May be my question was entitled to no consideration, but the same question it seems came up in open convention, and was discust by men perhaps of extensive reading, experience and wisdom, and whose opinions Mr. B. has never seen.

I submit to the bee-keepers if my question was fair and legitimate, and with no thought of putting up a job on them.

Stephenson Co., Ill.

Comb Foundation—Is Its Use Profitable?

BY E. S. LOVESY.

After reading what Messrs. Deacon and "Sage-Brush" had to say on this subject (see pages 599 and 708, 1897). I send a little of my own and other bee-keepers' experience. There are considerable sound, practical comments, and some reasonable conclusions drawn by Mr. Deacon, and while I agree with him to a considerable extent, my experience in this matter is such that some of my conclusions differ from his, and my object in this article will be to show wherein and why my experience does not agree with his.

He admits that there is an advantage in the use of foundation in excluding an excessive amount of drone-cells, but there is one point I might name here in favor of foundation, which neither Mr. D. nor "Sage-Brush" mentions, namely, that a plentiful use of foundation in the brood-chamber will insure not only nice, straight worker-combs, but it gives the queen ample laying-room, which in turn gives strong colonies, and without strong colonies no one can succeed in the bee-industry.

I might give considerable of my personal experience. The season of 1897, in the spring and early summer, our bees did not gather much honey, as a rule. There were a few exceptions, but soon after the middle of July, in many localities, a heavy honey-flow set in, and in many instances the bees brought the honey in so rapidly that as fast as the brood hatcht the bees filled every possible space with honey, thus crowding the queen out of laying space. In traveling through this county I found hundreds in this condition, some with a few cells of brood, some with none, and some that were weak from this cause. But in every instance where the bees were not weakened down too much by taking out three or four combs of honey, and by replacing with sheets of foundation, the bees went to work drawing out the combs immediately, and in a few days the queen had these new combs full of eggs, even by the time the combs were half drawn out, keeping the bees busy finishing the combs and sealing the brood. Under those conditions the foundation was more preferable than to extract those combs and replace them, because in that case the bees, instead of cleaning out the cells for the queen to lay, would have filled them with honey again, but by using the foundation, and by extracting those combs and putting on another story with more foundation, the bees build up fast both in honey and numbers; but many of those not so treated proved a flat failure.

I also found hundreds of strong colonies with empty boxes, or boxes with empty frames, and bees would not work in them, but they would hang on the outside of the hive, while new colonies with frames of comb and foundation, with less than half the number of bees, filled their hives full of honey, gathering five or more pounds per day.

In the saving of time, by the use of foundation, Mr. D. asks, "Is this as great as is generally assumed?" He says: "Take two exactly strong colonies at the commencement of a good honey-flow, give to the one ¼-inch starters, and to the other full sheets of foundation. Would there be any appreciable difference in the time the hives would be furnisht with completed combs? And even should there be a slight saving in time, would it be proportionate to the extra cost?"

According to mine, and the experience of many other bee-keepers here, I answer yes. I will give some illustrations of the season of 1897.

I divided some bees for a bee-keeper who would not use much foundation because of the cost. I took one of the new swarms, but when it came to putting on the surplus boxes mine were the weakest, owing to the hive being new and of a different shape from the others. The bees did not take to it as readily, but I put in four drawn combs and five sheets of foundation; in 16 days those nine Langstroth frames were full, filling a 10-frame hive, and weighing 72 pounds. I put surplus boxes on the 11 remaining hives at the same time, putting small starters on about half of the frames; three of them had no starters, and two had empty boxes and no frames, and while nearly all those colonies were strong, some of them did not gather 15 pounds in the 16 days, and the best one of the lot did not produce 35 pounds in the same given time.

I also sacrificed one of my own colonies in thus experimenting. I had 10 colonies in 10-frame Langstroth hives, three stories; those colonies were so strong that they past in and out of the hives 40 or 50 bees in a cluster. I took one of the strongest of them and put small starters on half the frames, with the rest of the frames empty. On the other hives I put half drawn combs, and half with sheets of foundation. In 10 days the best of those colonies produced 93 pounds of honey, and the others ranged from 50 to 75 pounds, except the one with the starters and empty frames—it managed to partly build out the combs, and produced 32 pounds.

I might go on and give a hundred illustrations of this kind, but it is not necessary.

Mr. Deacon says the secretion of wax goes on, and by the use of foundation the scales fall wastefully to the floor of the hive. This is not my experience. In the use of foundation the wax that the bees produce is needed to draw out the combs, and the more we use of it, and the more drawn combs we have, the more honey we get, and the wax is needed for capping. Thus, while we use an abundance of foundation, we always use it for profit. But when it comes to the use of heavy brood foundation, five or six feet to the pound, I fully agree with Mr. Deacon. This building-out or pulling-out process never did give me any satisfaction. My experience has been that instead of saving time in pulling out heavy foundation the bees lost time thinning it down; besides, this objectionable feature, to have to pay 8 to 10 cents a surface foot for it, makes it much more expensive than the thinner variety.

I am aware that many bee-keepers think that heavy foundation is all right; under those conditions I would say, let all those buy it that want to, but for my part I don't want to.

The following report, from a Salt Lake county bee-keeper, speaks for itself. These results were obtained by proper management, and by a liberal use of foundation and drawn combs. I can vouch for this report, for I divided the bees, and I saw the crop of honey put up in 60-pound cans:

SALT LAKE COUNTY, Nov. 19, 1897.

MR. LOVESY:—I send you a report of my honey crop from 16 colonies of bees, spring count, taken off as follows the past season, extracted on the dates named:

July 2, 96 pounds; July 13, 206; July 23, 313; July 31, 432; Aug. 10, 513; Aug. 17, 510; Aug. 24, 630; Aug. 31, 635; Sept. 7, 550; Sept. 14, 537; Sept. 22, 690; Oct. 12, 688. Total, 5,800 pounds.

I have also taken off 100 frames from the top boxes containing from one to three pounds of honey, that I will use in the spring in building up. I also had an increase of 19 colonies, making 35 in the fall.

All of the above facts I'm willing to swear to if necessary.

I thank Mr. Lovesy, our county bee-inspector, for his timely advice and assistance in the management of my apiary, and especially his method of increase by dividing pleased me very much. To him I owe, perhaps, my success.

WILLIAM.

This gentleman has personal reasons for not giving his full name and address. One reason for this bee-keeper's success was this: Through unwise counsel he packt his bees air-tight the previous winter, and smothered more than half of them, leaving an abundance of drawn combs, many of them partly filled with honey. Those frames and foundation were one of the main causes for the success obtained, because with them, and by exercising caution and wisdom in dividing, in a few days we had the new colonies working in the supers. This materially helpt to produce the above results, as 3,000 bees can work on a sheet of foundation as easily as 300 can work on a bare top-bar.

In regard to the article by "Sage Brush," after asking, "Is the use of comb foundation profitable when used in large quantities?" and after giving an emphatic *No*, he fails to give us one sentence in favor of his side, or the negative side of the question, and altho living in the wonderful honey-producing State of California, and in a locality, as he says, where the bees gather honey more or less all the year, thus making it possible to succeed better in experiments—yet, with all those experiments, and after getting such an abundance of nice worker-combs, he reports two good extractings from them the same season, while our Salt Lake bee-keeper got 12 extractings in 3½ months.

Still, "Sage Brush" must live in a good bee-country, for he says that after the honey or extracting season was over, he took all the frames except three from a number of colonies and started them to building worker-combs till he had all the combs he needed. But to adopt this method in some localities after the honey season is over, would be equivalent to killing the bees, but if he lives in a locality where the bees gather honey more or less all the year, why punish them by making them build combs instead of gathering honey? I think if "Sage Brush" will use plenty of foundation next time, he will have more profits and a better report.

Salt Lake Co., Utah.

Laws of Heredity—How Honey-Producers and Queen-Breeders Working Together May Profit by Them.

BY J. E. CRANE.

In previous issues of the Review I have given a number of illustrations showing the great changes in plant and animal life brought about by the agency of man. It may be briefly noted that such changes have been made as are most *useful* to man, or have most pleased his fancy. Thus we see that the blossoms of different varieties of cabbages or potatoes remain quite unchanged, as man has taken no special interest in them; while in plants cultivated for the beauty of their flowers, we find the greatest changes made in these parts.

There is really very little that is new in knowledge regarding the laws of heredity; as in an ancient Chinese encyclopedia, the principles of selection are fully given. Explicit rules are laid down by some of the Roman classical writers; and we find Jacob, nearly 4,000 years ago, breeding for color. In early English history, laws were made prohibiting the exportation of choice animals, and also for the destruction of horses that were undesirable.

The most eminent breeders do not favor the *crossing* of different breeds, but rather that of taking that breed that most nearly approaches their ideal, and then, by the most careful selection, breed out defects and up to their standard. To do this the greatest skill is required; as the law of reversion comes in which all improved varieties tend to revert back to their former type. Charles Darwin says:

"What English breeders have actually effected is proved by the enormous prices given for animals with a good pedigree; and these have been exported to almost every quarter of the world. The improvement is by no means generally due to crossing different breeds; all the best breeders are strongly opposed to this practice except sometimes among closely allied sub-breeds. And when a cross has been made, the closest selection is far more indispensable even than in ordinary cases. If selection consisted merely in separating some very distinct variety, and breeding from it, the principle would be so obvious as hardly to be worth notice; but its importance consists in the great effect produced by the accumulation in one direction, during successive generations, of differences absolutely inappreciable by an uneducated eye—differences which I for one have vainly attempted to appreciate. Not one man in a thousand has accuracy of eye and judgment sufficient to become an eminent breeder. If gifted with these qualities, and he studies his subject for years, and devotes his lifetime to it with indomitable perseverance, he will succeed; if he lacks any of these qualities he will assuredly fail. Few would readily believe in the natural capacity and years of practice requisite to become even a skillful pigeon-fancier."

It may be objected that the breeder of bees cannot control his male bees, consequently his work is largely one of chance; and there is some ground for this objection, but, on the other hand, the queen-breeder can rear several generations in a single season, or rear and thoroughly test two or three generations, while the breeder of domestic animals can rear only one; which will largely compensate for his inability to control the mating of his queens.

Before the advent of movable combs the breeding of bees, or the improvement of bees, was attended with far greater difficulties than at present; and we are not surprised that they have changed less than other animal life under domestication; but now with the improvements of the last 50 years, and the light these improvements have given us, may we not expect that future improvement will be rapid?

The separation of bees into several well-known breeds, and the tendency of these breeds to vary, aided by the skill of some of our queen-breeders, leads me to believe that we may some day have a distinctively American breed adapted to our hot summers and cold winters, and great variety of flowers. Already I believe we have much lighter-colored bees than may be found in Europe. As there has been a demand for light-colored bees, the change in this direction has been more markt than in any other, but we must not forget that the amount of honey gathered by a colony of bees does not depend upon their color, but rather upon other and more valuable points of excellence.

I do not object to color, for bright-colored bees give pleasure to our love of the beautiful, and our climate and flora seem well adapted to such a race of bees, but I believe this matter of color has been carried far enough for the present. Let us rather select for queen-breeding those varieties the workers of which show the greatest ability to gather honey—white honey if it is to be had, and if not, can gather that which is darker; and those in which the swarming-impulse is but feebly developt.

Strength of constitution, gentleness, comb-building, prolificness and other qualities should not be neglected in making up the scale of points. A stream cannot rise above its fountain. Let our ideal bees be far in advance of our present breeds, and let us do what we can to bring our bees up to our ideal standard. "Bring the flag back to the ranks," was the command of the captain to his color-bearer, who had planted his flag in advance of his company. "Bring your ranks up to the flag," was his heroic reply. How shall we reach our ideal? Says a popular writer:

"The key is man's power of cumulative selection; nature gives successive variations; man adds them up in certain directions useful to himself. In this sense he may be said to have made for himself useful breeds."

Doubtless honey-producers must depend to a considerable extent upon the queen-breeder for these improvements. His experience, the time at his command, and the skill he has acquired, gives him greatly the advantage of those who are working for honey alone. The efforts of the queen-breeder may also be greatly aided by the honey-producer. Both must work together for a common object. The honey-producer from his larger number of colonies has a better chance to test the value of queens than has the queen-breeder; while the latter can do more to multiply and make valuable qualities permanent.

Sometimes a single colony will be very markt in almost every good quality, in a yard of 100 colonies. Such a colony came under my observation some years ago in one of my yards. Quiet, gentle, businesslike in breeding and comb-building, without any disposition to swarm, it workt on year after year for three years, when I moved it home to obtain brood from it to improve my home yard. Here it remained two years more with the same queen, always maintaining the same character. If I could have every queen as good as the one in this colony, the profits of my bees would be largely increast—I believe twice what they now are. But a long series of years and many generations with the most careful selection will be required to make such traits permanent, so they will "come true."

Already the outlook is hopeful. Already there is reason to believe that some of the queen-breeders are working along these lines, and if these papers shall stimulate others in the same work, I shall feel that they have not been written in vain.—Review. Addison Co., Vt.

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Selling Granulated Extracted Honey.

BY G. M. DOOLITTLE.

Selling extracted honey in the granulated state, according to my views, is the only real, practical way of selling such honey. If you sell it in the liquid state, and it is not consumed soon, it will granulate, and in that case requires more explanation to convince your customer that he has not been defrauded through a spurious article, then it does to tell him how he can liquify that in a granulated state. Then honey in the granulated state can be handled quite roughly without any leakage, while when in the liquid form there is nothing quite so easy as having everything all daubed with the stuff, for customers seem bound not to keep it "right side up with care."

But there is one way of marketing honey, which is the "selling by sample." In all of my building up a trade for honey, I have found this the easiest. Go on every street in country, town or city and leave a sample of your product at every house, with the slip telling how to liquify it, or, if comb honey, cut off a "chunk" according to the number in the family, and then go around with what you have for sale two or three days later, and the houses where you do not make a sale, especially if you are willing to exchange the honey for the product of others, will be few and far between. This sample causes the "mouth to water," and the "good wife" and children prevail along the "honey line."

Then there is another way of marketing, applying wholly to extracted honey. When the honey has so granulated that it will but just run, pour it into light basswood boxes, holding 5, 10, 25 or 50 pounds, the same having been prepared during the leisure winter months, and having the inside corners paraffined, when it is to be set away till candied hard. Now put paraffine paper over the top, on this the slip about liquifying, and nail on the covers.

Next, from some of the same honey, cut out chunks weighing about two ounces, putting the same in a block of wood, having a suitable hole bore in it, or in a little box of suitable size, and mail the same to different parties in different towns, in regions where honey is not produced to any extent, putting in the slip about liquifying and telling of price, etc., when you will find orders coming in from fields rarely canvast for honey.

It is a good idea to mail such packages to postmasters, offering them wholesale figures on the honey, or offering a five or ten pound box at sample rates for introduction, and after once introduced, you will find a permanent market at such places. Such boxes of honey go at a low rate by freight, and as the honey is solid within there is little or no danger from breakage, even tho the boxes be made of one-fourth inch stuff. Years ago I shipt considerable honey in boxes this way, and never had a complaint from breakage.—Progressive Bee-Keeper. Onondaga Co., N. Y.

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Too Much Honey in the Hive.

BY HARRY LATHROP.

As a rule bee-keepers are not troubled with too much honey; but there are times when the brood-chamber may have too much for the best interests of the colony. In the earlier days of the extractor some writer advised to "keep the extractor going," and added that it would even pay to extract from the brood-chamber, and throw the honey away in order to give the queen room. If bees are properly handled there will be very little extracting from the brood-chamber. The ideal condition for colonies in the spring in this climate is to have them as my Browntown yard was this year; that is, come out of winter quarters quite heavy in stores, breed up rapidly, consume the honey in the combs, and replace it with brood, all stores to be consumed, and hive completely full of brood at the time honey begins to yield in excess of the daily consumption, at which time supers are added.

There is another condition I do not like, but one which I find in my Monroe apiary—a condition in which the colonies come out heavy with honey but rather weak in bees. Colonies build up slowly, and, instead of reducing the amount of honey in the combs, add to it from early sources. In such cases this honey must be promptly removed, or the colony will not amount to much.

My plan is to remove full combs and insert sheets of foundation in the center of the brood-chamber. The full combs removed, I sometimes use to contract brood-chambers in which I hive colonies to be run for comb honey. A full comb of honey is as good as a dummy for that purpose.

I was quite interested a few years ago in Mr. Boardman's plan of feeding-up in the spring, and two years ago last winter I spent a very pleasant day visiting at his home, and conferring with him in regard to it. I expected to try his method, and got a lot of feeders ready, but I have to confess that at this time I have had no chance to do any spring feeding since then, for the reason that I got all the honey I wanted, and sometimes a little more than necessary, from the fields. For my part I am glad of a condition which enables me to dispense with *all* feeding.—Gleanings.

Green Co., Wis.

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☞ See "Bee-Keeper's Guide" offer on page 415

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Melting Down or Levelling Unfinisht Sections.

Has it proved a success to melt off the face of unfinisht sections in order to make them even, or would an uncapping-knife be better? What should be done when the melter forms a cap over the comb? About how many sections can be melted to their proper shape in an hour? IOWA.

ANSWERS.—Melting down the surface of sections by means of the Taylor handy comb-leveler is a decided success, doing the work more rapidly and more satisfactorily than it can be done with a knife, for the combs being tender, unless the knife is exceedingly sharp, there is danger of breaking down the cell-walls. It is a very unusual thing, I think, for the melted wax to form a cap over the comb. If any such ever did form, I always left it to the care of the bees. I never timed the work of the leveler, but at a guess I should say 200 might be done in an hour.

As I never had experience with very large quantities (I try not to have many sections that need leveling down), I leave the way open for others to answer.

Questions on Contraction and Reversing.

1. In contraction of the brood-nest, as W. Z. Hutchinson advises on page 403, how many Danzy brood-frames with only 1-inch starters would you give a new swarm? Also, how soon would you put on the super?

2. What would be the effect if the brood-frames were reverst containing both sealed and unsealed honey, just as a super is put on?

3. What would be the effect on sealed and unsealed brood in reversing?

4. How many frames should be reverst at a time? And how soon should they be changed back to the proper position?

5. In using a deep-entrance bottom-board, are the bees liable to build comb between the bottom of the frames and the top of the board, if there is an inch space? OHIO.

ANSWERS.—1. Give half of the 10 frames at the start. Put on the super at once if a queen-excluder is used under the super, otherwise wait two or three days.

2. If there was no brood in the comb it would probably have no effect at all. If brood were in part of the comb it might force some of the honey into the super. At one time such practice was considerably discust, but at present it is hardly considered advisable.

3. Nothing, unless in a case where it might throw it out of place in a rather weak colony, running the risk of chilling if the weather should be cold.

4. Reverse the frames of only one hive, just enough to satisfy yourself that you don't want to follow up the practice. I don't know when is the best time to reverse back, but should think it might be in about two minutes.

5. With only an inch space it will be a rare thing to find any comb built down.

Do Not Work in Sections, Etc.

I started in the bee-business last year with seven colonies, and now have 65. I could have had many more but could not handle them.

1. My bees don't seem to work, but want to swarm all the time. Some of them will start and build comb in the super, and then quit. But few bees stay, and perhaps they will fill two or three sections. They have plenty of alfalfa, button-willow and white willow to work on. I am located on the San Joaquin river where there is plenty of bee-feed. Then they are very cross and will fight me at all times. Some of my new swarms have workt well, and had the supers filled in a few days, but the majority of them will go into the super and seem to work, and then quit. I could find no moths or anything bothering them, so could not decide what is the matter. The hives and supers are all nice and clean, as I always wash them out in strong salt water. They have become so bad that I lose about one-half of them by their losing their stingers. They even go after the chickens and ducks. My neighbor's bees across the river are just as bad as mine.

2. I use the common box-hive 16x20 inches, with V-top brood-frames. What is the best hive to use?

3. What is the right way to handle beeswax for market?

4. What about straining honey? CALIFORNIA.

ANSWERS.—1. As nearly as a guess can be made from the particulars given, the trouble is that your bees always swarm about the time they get fairly started in the surplus apartment, and after swarming they are left so weak that they stop working above. The thing for you to do is to throw all the strength possible into the swarms, and depend upon them for your surplus. When a colony sends out its first swarm, set the swarm in the place of the old hive, setting the old hive close beside the swarm. A week later take the old hive away, setting it in an entirely new place. By that means you weaken the old colony so much that it will swarm no more, and you also strengthen the swarm so much that it will be strong to work in the supers. The super may be put on the swarm two or three days after hiving, unless you have a queen-excluder under the super, in which case the super may be put on at once.

I hardly know what you mean by half of your bees losing their stingers, but perhaps if you should make a careful count you would find that a very small number have lost that useful appendage.

2. The term "box-hive" is used as applying to a box or hive in which there are no movable frames. As you have V brood-frames, you must have frame hives. It is quite possible that the hive you have is as good as any, an objection, however, being that it has a frame of an odd size. If you make a change, you will probably do well to adopt the frame that comes nearest standard in size, that which is commonly called the Langstroth frame, 17⅝ inches long and 9⅛ deep, outside measure.

3. If you should see the beeswax that is thrown on the market, you would probably conclude that there is no wrong way. But the brightest, cleanest wax brings the highest price. If you will get a solar extractor you will probably be all right as to the quality of your wax.

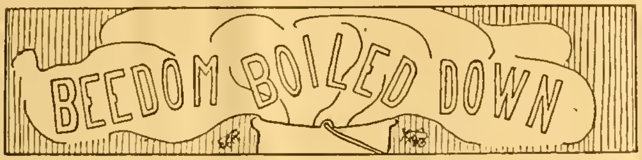
4. About the only way in which honey is strained, nowadays, is the straining of extracted honey, and all that is necessary is to let it pass through cheese-cloth, or some thin stuff, to take out the small quantity of bits of wax, or other objectionable parts that may be present.

When to Remove Surplus Honey.

When shall I take off the sections? A bee-keeper friend advises doing it when every one is filled and capt. Another, take off every box you can find in your super properly capt, and not wait until all are full. I never put on but one story of one-pound sections, and on a box-hive. I noticed the last row of 3 out of 18 in all remained uncapt over a week after others were all capt, so I removed 15 and put back the 3, and it would seem there would be a period of idleness unless this was done, as the whole colony could not work in 3 sections. Yesterday I took off 15 sections completely capt, from an early swarm in a 10-frame Langstroth hive, and put back 12 sections, about ¾ of the cells being capt, with 3 of the sections (in the outside row) the comb not extended. Now I could have waited longer, without doubt, in this case. Is it any damage to disturb the super? A few bees will get hurt. Will this white honey (stored from white clover) change color any for a difference of two or perhaps three weeks in time of removal? MASSACHUSETTS.

ANSWERS. — Answering your questions in their spirit rather than in their order, it may be said that any harm resulting from the disturbance of the colony in taking off supers is hardly enough to be taken into account. If a section of honey is left on three weeks after it is sealed over, the cappings will become darker, and such section will not be quite so good for the market as if taken off just as soon as sealed, for the market demands the very whitest. As to the quality of the honey in the cells, it will not become any darker in color, but will become riper, as it is called, that is, it will become thicker and better. So if you want the sections for your own use, and don't care so much for looks as you do for eating qualities, you will do well to leave the sections on some time after they are sealed.

If you leave a super of sections on the hive till the last section is sealed, not giving any additional room, the bees will be crowded for room while sealing up the last, if honey is coming in. Better give additional room by putting a second super under the first when the first is perhaps half filled. If you want sections very white, don't wait till the outside sections are all sealed. Some advocate taking out the sections singly as fast as each one is sealed. You'll hardly keep that up very long on a large scale. Too much work. Take off the whole super as soon as all are sealed except the four corner sections, and perhaps a few others. Then take out of the filled supers all that are not fully sealed, put them together in a super, filling up with empty sections, if necessary, and put back on the hive to be finisht.



Getting Honey When Others Do Not.—Gleanings reports Vernon Burt as getting honey when others in his region were getting none, the secret being that Mr. Burt had followed the Boardman plan of feeding in advance so as to have the brood-nest full, which otherwise would have had to be filled with the honey that was put in the supers.

Hive-Tool.—For prying loose frames, supers, etc., a screw-driver is quite commonly used. The editor of Gleanings is on the hunt for a better tool, and the fraternity, as usual, are prompt to give help, so it is to be hoped that a good tool of the sort will shortly be on the market. Fred S. Thorington says, in the Progressive Bee-Keeper, that he takes the top layer of a buggy-spring.

Comb vs. Extracted Honey.—R. C. Aikin seems to think there is not such a very big difference between the amount produced by a colony, whether comb or extracted; while G. M. Doolittle says he has repeatedly proved that the average yield of extracted will double that of comb. But he says that with the same labor he can sell double the amount of comb, and generally get double the price.—Progressive Bee-Keeper.

Weight of Sections.—F. Greiner says, in Gleanings, that the wood in sections should not be less than ⅛-inch thick; 1,000 sections weigh about 60 pounds. When they are enough thinner to weigh only 50 pounds, the bee-keeper loses $3.50 on a thousand sections, because the wood is sold with the honey at 10 cents a pound, bringing $6.00 a thousand or $3.50 more than the cost. The editor says many western bee-keepers prefer sections nine to the inch, because the freight is less. But it would have to be a long haul to make the freight on 10 pounds equal $3.50.

Improvements in Section-Cleaners still continue. In Gleanings, Arthur Howe describes a cleaner he has made, using an old bicycle as the power, geared so that one pedal revolution equals a wheel 66 inches in diameter. Above is a master-wheel of an old sewing machine, connected with a pulley on the polishing-lathe, which has two polishing-wheels, one covered with No. 1½ sand-paper for the rough work, and the other with emory-cloth to finish with.

In the same paper, H. Perry's suggestion is to have a disk fitted out with rasps next the periphery, and with sand-paper in the center. The rasps are to take off the bulk of the propolis; then by sliding the section to the center of the disk the sand-paper is to finish the job.

Contraction of Colonies.—Messrs. Hutchinson and Taylor are in controversy with the editor of Gleanings. The latter referred to the contraction of the brood-nest as a fad that had perhaps past away. Editor Hutchinson replies:

"So far as I know, no one has practiced contraction of old establisht colonies—those that had their brood-nests filled with bees, brood and honey—it was only in hiving swarms that contraction was practiced. It is possible that some practiced contraction with establisht colonies; it seems that you have understood it that way, but you are the first man I have ever met who so understood it or practiced it."

Mr. Root says contraction of establisht brood-nests is referred to in "Langstroth-Revised," and in Root's "A B C of Bee-Culture." After consulting back volumes of the Review, American Bee Journal, and Gleanings, he confesses that there were more cases than he had supposed of contraction at time of swarming, but still thinks the majority were of the other kind, and gives the following from Miller's "Year Among the Bees":

"Up to the time of putting on supers, the desire has been to have the bees occupy as many combs as possible....When it comes time to put on supers they are reduced to four or five frames."

Bringing the matter down to recent date, he gives the following quotation from the Belgian L'Abeille for June, 1898, in its regular department of instruction for the month:

"In order to force the bees to occupy them immediately, it is advisable to limit at the same time the space which the colony occupies to about ⅔ of its capacity. If this practice brings the colony to the swarming point, the swarm is put upon a few frames."

It is very evident that the two gentlemen have been looking at opposite sides of the shield, if indeed they have not been looking at two different shields.

Marketing Honey.—R. C. Aikin gives, in Progressive, the general principles upon which he proceeds, as follows:

"Having studied out the situation I try to do what is right, and what I can do. If the city and general markets will not pay good prices, I decide that the poor at home have a better right to cheap eating than has the man with capital. It costs me a little more to sell out in small lots than to sell at wholesale, so I charge a little above the wholesale price, and let my neighbors have my honey. The poor man's 50 cents will buy just as many pounds as the rich man's, one price to all—no cut for quantity. I try to make my extracted take the place of foreign sweets—sugar, syrups and glucose. My comb honey I hold higher, because it requires more skill, which means more preparation on my part to be able to do it well—to produce it. I take trade whenever my neighbor has what I need, and would buy."

Bee-Quilts.—Those who still use sheets or quilts over their frames may be interested to know how Fred S. Thorington manages it, as given in the Progressive Bee-Keeper. He says:

"For a cloth cover over frames, sections, etc., I use heavy, unbleacht sheeting boiled in linseed oil, in which some rubber cut in small pieces has been thrown, the oil and rubber boiled together for a few moments before the cloth is put in. The cloth should be held upon a stick in the air occasionally, and be kept well stirred while being boiled. When done, hang to dry a short time before being folded or cut into blankets to fit the hive. Rubber from the soles of shoes or boots, if good, will do to use. I have used blankets made as above mentioned for years, and find the bees do not gnaw them much. Oil enough to cover the cloth when boiling is all that is wanted."

Selling Granulated Honey.—R. C. Aikin says he has changed his practice, and now does not try to keep his extracted honey liquid, but sells it in the granulated state. He thinks there is no trouble about it when people get to understand it. Of course he gives printed instructions for the management of granulated honey. G. M. Doolittle thinks it is the only really practical way to sell extracted honey. If sold in the liquid form, the customer thinks he has been imposed upon when the honey granulates. Grocers have less "daub" with granulated than with liquid. Another very important point, if correct, has perhaps not been given in print before. Mr. Doolittle says:

"Then every time granulated honey is liquefied, there comes to it that nice aroma, so inviting to the smell and taste, which it had when fresh from the combs, while that long standing in the liquid state, loses this aroma, to a certain extent."—Progressive Bee-Keeper.

Honey as Food is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey among should-be consumers. The forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 20 cents; 50 for 35 cents; 100 for 65 cents; 250 for $1.50; 500 for $2.75. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all other bee-keepers possible to subscribe for it. See premium offers on page 458.

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Still There's Room.—General-Manager Secor, of the United States Bee-Keepers' Union, writing us July 9, said:

> "Say, those Arizona bee-keepers are hustlers. They sent in 18 names and dollars in one batch recently. We are 'getting there' slowly. Still there's room in the largest organization ever known in America for bee-keepers."

Yes, of course there's room for more, and we hope that a great many others will join the Union at once. It should be 1,000 members strong now, then when the Union started out after anything it would be more likely to get it. We would like to know that every reader of the American Bee Journal is a member of the United States Bee-Keepers' Union. Why not?

◆

Plain Sections a Success.—Hon. Geo. E. Hilton—one of Michigan's largest bee-keepers—wrote Gleanings recently: "My men report the plain sections a success." Another correspondent reported: "I have just taken off some of the new plain sections, and they are a success, sure—well filled—not too full."

All will be interested to know the final verdict on the plain sections and fences after general and thorough trial this year.

◆

Important to Minnesota Bee-Keepers.—We received the following letter just a little too late to appear last week:

> EDITOR YORK:—Will you please ask the bee-keepers of Minnesota, through the columns of your paper, to correspond with E. L. Danforth, Secretary of the State Commission of the Trans-Mississippi International Exposition, 221 Kasota Building, Minneapolis, Minn., with the view of furnishing honey for exhibition at Omaha? Bee-keepers will be paid for their product as soon as it can be sold after the Exposition. Any damage or breakage will be made good by the Commission, and the highest market price will be obtained. It is very important that the Commission have honey right away, both comb and extracted, in order to make a creditable display for our State. Yours truly,
>
> MRS. H. G. ACKLIN,
> *Chairman Committee Minnesota State Bee-Keepers' Association.*

In a note following the above Mrs. Acklin suggested that we add "something which will arouse the interest of Minnesota bee-keepers, as they are responding very slowly to the call for honey." We cannot see how anything that we might say would emphasize the foregoing appeal for honey. State pride alone should cause the bee-keepers of Minnesota to write at once to Mr. Danforth, and offer him all the honey he can use—that is, if the bee-keepers have any honey that they can furnish.

◆

Treating and Curing Foul Brood.—Mr. N. E. France, Wisconsin's foul brood inspector, in the Review reports on his work. He says, among other things:

> "In general, I follow Mr. McEvoy's treatment, and, so far, have cured *every case* I have handled—burning only two hives. Such property as can be saved I never destroy. The old, diseased combs and frames contain the danger, and in most cases are burned."

We are glad to note that Mr. France is having such uniform success in his efforts. He has a large field to cover, and evidently is doing a good work. He seems to be the right man in the right place.

◆

Great Basswood Bloom.—Early Tuesday evening, July 12, we mounted our bicycle and rode some 8 miles from Chicago to see Mr. H. S. Jones—a bee-keeper who has 30 colonies—and also to view the wonderful basswood bloom near him. We could inhale the delightful perfume of the blossoms some rods before arriving at the trees. The tops of some of the stately basswoods presented the appearance of fruit trees laden with their abundance of luscious fruit at harvest time. One tree was measured, and it had a diameter of full 30 inches, being perhaps 75 to 100 feet tall.

We understand there are several hundred acres along the river in one strip, and the bees fly like bullets to and from the basswood bloom. Of course there will be a large yield from that source.

The country surrounding this forest with its numberless basswood trees is well stockt with bees, and their owners will doubtless secure a good crop. There is also much sweet clover all along the roads, so that from both the basswood and clover the bees should render a good account of themselves by fall.

◆

Freight Rate on Bees.—Some time ago there was a petition sent to the Western Classification Committee, requesting that bees in hives be given a less than carload rating. That petition came before the Committee at its late meeting at Manitou Springs, Colo. We wrote the chairman of the Committee, Mr. J. T. Ripley, to learn as to the fate of the petition, and the following is his reply:

> GEORGE W. YORK, ESQ., Editor American Bee Journal.—
> *Dear Sir:*—Answering your favor of the 7th inst.
>
> At the late meeting of this Committee, the petition to provide for shipments of bees in hives in less than carloads was considered, but no change in the classification was made.
>
> The members of the Committee seemed to feel that it is not safe to carry the goods by freight trains, and that it is fairly express traffic. No other objections were urged, as I recall it. Yours truly, J. T. RIPLEY,
> *Chairman Committee.*

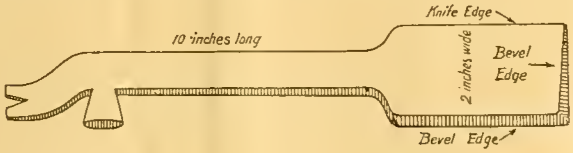
Indirectly we understand that the petition came very nearly being granted; and that if bee-keepers had shown the slightest interest in the matter it would almost certainly have been approved. We urged bee-keepers to write letters to the Classification Committee, calling their attention to the justice of the petition, and that it be favorably acted upon. And yet we learn that *only two* or *three* letters were received by the Committee! How is that for apathy and general indifference on the part of bee-keepers? And that, too, when it comes to a matter that is wholly in their interest.

It seems strange that it is so hard to get bee-keepers united on one thing. Nothing can be accomplisht in any other way. "In union is strength" is as true to-day as ever. Bee-keepers need to learn that truth, and then whenever there is an important object to be gained, *all* pull together and win.

◆

Wortman's Handy Tool.—A short time ago we received the following from Mr. A. Wortman, of White Co., Ind.:

> I send you a rough sketch of a combination tool I had made out of a heavy file. It is just the thing for lifting frames and supers, and cleaning off any wax on supers, covers, etc. I will give it to the bee-keeping fraternity.
>
> A. WORTMAN.



The illustration shows the tool very well. Mr. W. calls it, "Wortman's handy tool for bee-keepers, being a hammer, tack-puller, frame-lifter, super-lifter, knife for cutting burr-combs, scraper for cleaning propolis from hives, etc."

◆

Sugar-Honey in Germany.—The following paragraph appeared in the Chicago Inter-Ocean for July 13:

> SUGAR-HONEY.—A substitute for honey has been introduced in Germany under the name of "sugar-honey," and consists of sugar, water, minute amounts of mineral substances, and free acid.

We can see clearly enough where the "sugar" part comes in, but fail to find any "honey" about it. But perhaps some of that "free acid" is formic acid! There's lots of it to be had "free" around our hives. You needn't even go to the trouble of asking for it!

But, seriously, why should any one want a substitute for pure honey when there is plenty of the latter to be had, and at a low price, too? Simply another fraudulent scheme to get money under false pretenses. But Germany is not alone in that business.

THE WEEKLY BUDGET

MR. N. E. FRANCE, of Grant Co., Wis., State inspector of apiaries, writing us July 12, said:

> "Basswood is doing well at this date, but is not going to last many days longer. We have extracted 20,000 pounds of honey to date."

MR. EDWIN BEVINS, of Decatur Co., Iowa, sends us the following paragraph:

> "I notice that Editor Hutchinson has engaged R. L. Taylor to be general critic for the Review. I hope Mr. Taylor will turn to page 152 of that paper for May, and see if there is anything to find fault with in that paragraph which relates to the "curling of comb foundation." My school-teachers did not allow me to use adjectives for adverbs."

The sentence to which Mr. Bevins refers, we think, is this:

> "In their troubles the lower edge of the foundation turns *invariable out*, away from the center of the super, etc."

Of course Mr. Taylor should have used the word "invariably" instead of "invariable," in the sentence referred to.

"People who live in glass houses shouldn't throw stones," is pretty good advice—unless they are willing to take a few smashes themselves in return.

MR. J. F. EGGERS, of Hall Co., Nebr., wrote us July 11:

> "White and sweet clovers are booming, and so are the bees."

Mr. Eggers is the author of that latest German bee-book—"Bienenzucht und Honiggewinnung." It is up-to-date, and is sent postpaid for 50 cents. Orders may be sent to this office.

MR. LOUIS R. LIGHTON, of Omaha, referring to the meeting of the United States Bee-Keepers' Union there this year, said in a letter to us:

> "I can assure you that Omaha will appreciate a convention of this kind; and you may have no fears but what you will have a *royal good time.*"

No doubt Nebraska bee-keepers will do grandly by the convention this year, as they did when it was held at Lincoln, in 1896.

EDITOR R. F. HOLTERMANN, of the Canadian Bee Journal, will have charge of the apiarian exhibit at the Exposition and Industrial Fair to be held in Toronto, Ont., Aug. 29 to Sept. 10. Our esteemed contemporary says:

> "It will show the natural history of the bee, and how honey is produced......It will be one of the most attractive exhibits on the grounds."

We don't doubt it at all, for those Canadians know how to put up a good apiarian show. And Editor Holtermann will supervise it all right.

MR. H. H. KNAPP, of Fairfield Co., Conn., wrote us June 27:

> "Please discontinue the American Bee Journal to me after my subscription expires, July 1, 1898. I will not renew again, as I am now nearly 80 years old, and cannot attend my bees as I used to, so give up the Journal. I wish you every success for the future of your paper."

Quite frequently we receive letters like the above. There is a sadness about it, as we must all come to the evening of life some time, and lay down all earthly cares. The bees must be left behind, and the papers as well. It is sad to part with the old friends who have been with us long, who know us well, and whom we know. But there is comfort in the thought that when we have grown old in our work here, "over yonder," in that better home, we'll all be young again, and begin anew that higher life. So while we may feel saddened when the old friends leave us, yet we can rejoice with them in the thought that shortly they'll be where cares come no more—where there is no more sickness and pain—where there's rest.

There is also encouragement in the thought that while some are giving up the work others are coming on the stage of action, and will take up their share of the world's burdens. And so it ever goes on—some are going, others coming, and all marching "onward and upward."

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 20 cents; 100 for 35 cents; or 200 for 60 cents.

◆

The Names and Addresses of all your bee-friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums we are offering. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.

FOR THE READERS OF THE AMERICAN BEE JOURNAL.

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—WITH—

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Now, let every one go to work, and help roll up the largest list of subscribers the old American Bee Journal ever had. It can easily be done if ALL who possibly can get a few new subscribers will kindly do so.

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QUESTION-BOX

In the multitude of counsellors there is safety.—Prov. 11-14.

Should Everybody, or Every Farmer, Keep Bees?

Query 77.—Is it to the interest of the honey-producers of America to advocate that everybody, or every farmer, should keep a few colonies of bees?—Calif.

E. France—*No.*

W. G. Larrabee—No.

A. B. Mason—*No, sir.*

D. W. Heise—I think not.

Rev. M. Mahin—Of course not.

Prof. A. J. Cook—I do not think it true, and so not for the interest of anybody.

O. O. Poppleton—I doubt whether honey-producers will be very much affected either way.

Jas. A. Stone—If it would encourage them in producing honey-plants I would say yes. If not, I would say no.

Emerson T. Abbott—It is to the interest of the farmer, and, if he follows my advice, he will be a honey-producer.

J. A. Green—I think that it is very decidedly against their interests financially. If we had only one-half or one-

50c ✻ Tested Queens ✻ 50c
For the next 30 days I will sell Tested Queens reared from the best Italian stock at
50c each—or $5.50 per dozen.
Untested, 40c.—or 3 for $1.00. Safe arrival.
W. J. FOREHAND, Fort Deposit, Alabama.
28A3t Please mention the Bee Journal.

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We have a limited number of barrels of **very best Basswood** Extracted Honey, weighing NET about 280 lbs. which we are offering at 6 cents per lb. f. o. b. Chicago. Do you want a barrel or so of it? If so, address, with the cash,
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Root's Goods at Root's Prices.
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Practical Hints" will be mailed for 10c. in stamps. Apply to—
Chas. F. Muth & Son, Cincinnati, Ohio.
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Queens, $1.00; after August, 50 cents. MRS. A. A. SIMPSON, Swarts, Pa. 27A6t
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"He fools his customers by sending more than is expected."—See page 105, current volume Bee Journal, and ask for the free pamphlet referred to. I am now prepared to fill orders promptly with FINE YELLOW-TO-THE-TIP **QUEENS**, at 75c each; 3 for $2 00, or 6 for $3.50. Purely-mated Queens reared from the best stock and by the best method known, is what I furnish, and will prove it to all who give me a chance. Money Order Office, Warrenton.

Address, **W. H. PRIDGEN.**
22Atf Creek, Warren County, N. C.
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Tested Queens in April and May, $1.00. Untested, 75c. Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

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Bee-Supplies! ROOT'S GOODS at Root's Prices.

Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Cat. free. **Walter S. Pouder,**
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QUEENS
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Ten years' experience with the best of methods and breeders enables him to furnish the best of Queens—Golden Italian—Doolittle's strain—warranted purely mated, 50c; 6 for $2 75. Leather Colored same price. Safe arrival. Will run 1,200 Nuclei, so there will be no waiting for your Queens. No postage stamps wanted. 23A16t

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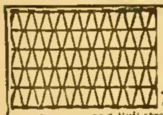

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Will continue to rear none but the **BEST QUEENS.** Untested, 50 cents; Tested, $1.00.

GEO. W. HUFSTEDLER, Prop.,
President of National Queen-Breeders' Union,
24Atf **Beeville, Texas.**
Please mention Bee Journal when writing.

fourth the present number of honey-producers we would get much better prices for honey, and it is the small producers who damage the markets most.

R. C. Aikin—Everybody should not keep bees, but the majority of *farmers* should produce their *own* honey. That is my advice.

J. E. Pond—No, not in my opinion. Reasons are ample for my opinion, but as they are not askt for, I will not take space to give them.

J. M. Hambaugh—While I believe it would be to the best interest of humanity in general, it might not be to the best interest of the specialist.

Mrs. L. Harrison—No; but it is for the good of the land in which we dwell. Plenty of bees to fertilize the flowers—more fruit, clover, vegetables, etc.

Dr. C. C. Miller—I don't know. Whatever is the thing that will be the greatest good to the greatest number is the thing that ought to be done.

Eugene Secor—Perhaps not to the interest of the specialist, but I think it to the interest of the people if said farmer will so inform himself as to produce what his family needs.

R. L. Taylor—No, it's not to the interest of honey-producers. The interests of the public and the interests of the followers of any occupation are very liable to clash.

C. H. Dibbern—No. I am a merchant as well as a bee-keeper, and I should consider it a very foolish, as well as suicidal proceeding, to preach to everybody to go into my line of business.

Mrs. J. M. Null—No. Most generally the breaking down or ruin of markets is directly attributable to this class of bee-keepers, and they succeed equally as well in the line of overstocking a locality.

Chas. Dadant & Son—It matters but little, for no matter what you say or advise, there will only be a small proportion of successful apiarists among our farmers. Only those who like the pursuit will stay with it.

P. H. Elwood—No. There can be an over-production of honey as with everything else. And it is the observation of bee-keepers that those who keep but a few colonies are more liable to cut prices than those who keep many, or are more dependent upon their bees for a living.

Dr. J. P. H. Brown—I am not so selfish as to believe that the interests of the specialist honey-producer would suffer. There are too many mouths in America to *take in* the honey if the *taste is cultivated*. Each producer must do his part toward developing the taste.

G. W. Demaree—There is mighty little to trouble intelligent bee-keepers along this line. People who keep a few colonies of bees don't know enough about bees to hurt the honey-trade. Sometimes they have them and sometimes they don't. Bees are not like weeds! Don't be disturbed. It requires knowledge, and work, too, to succeed with bees.

G. M. Doolittle—Is it to the interest of the producers of poultry, hogs, sheep, cattle and grain to advocate that everybody, or every farmer, should keep or raise a few or as many of the above as he pleases? It is not well to get little and mean in our ideas regarding keeping others out of the business we are in. The world is broad enough for all who are willing to work, but should have no

A Book Recommended by Dr. Gallup.

THE NEW METHOD
In Health and Disease.

By W. E Forest, M. D., 12th Edition, Revised, Illustrated, and Enlarged. This is the greatest and best work ever publisht as a HOME PHYSICIAN, and as

A Guide to Health.

It makes the way from **Weakness** to **Strength** so plain that only those who are past recovery (the very few) need to be sick, and the well who will follow its teachings **cannot be sick.** It is now in many families the only counsellor in matters of health, saving the need of calling a physician and all expenses for medicines, as it teaches Hygiene and the use of Nature's remedies, **not a drug treatment.**

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are considered, and there is not a curable disease that has not been helpt by some of the "*New Methods*" given here; even those who have been pronounced **Consumptive** have been entirely cured. While for **Rheumatism, Indigestion, Dyspepsia, Constipation, Dysentary, Liver and Kidney Troubles, Catarrh, Emaciation, General Debility, Nervous Exhaustion, Diseases Peculiar to Women,** etc., the methods are sure, and can be carried out at one's own home and with little or no expense.

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is illustrated with a number of Anatomical plates from the best English work on Anatomy publisht, and others made expressly for this work; contains 300 pages, printed on fine calendered paper, and although the price of the first edition (much smaller in size and without illustrations) was $2.50, we sell this at $1.00, postpaid.

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Sure to please. T. N. BRIGGS, Marion, Mass.
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will sell excursion tickets to Chautauqua Lake and return on July 29 at one fare for the round trip, with return limit of 30 days from date of sale by depositing tickets with Secretary of Chautauqua Assembly. Tickets good on any of our through express trains. Cheap rates to many other points East. Communicate with this office, 111 Adams St., Chicago, for any further information desired. Van Buren Street Passenger Station, Chicago (on the loop.) Telephone Main 3389. (44-28-3)

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For all the Good, Pure Yellow Beeswax delivered to our office till further notice, we will pay 25 cents per pound, CASH. No commission. Now if you want cash, promptly, for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

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Texas Queens

Best honey-gathering strain in America. Untested, 75c. Write for a Circular.
J. D. GIVENS, Lisbon, Tex.
7A26t Please mention the Bee Journal.

July 29
the Nickel Plate road will run an excursion to Chautauqua Lake at one fare for the round trip. Write to J. Y. Calahan, 111 Adams St., Chicago, for particulars. Telephone Main 3389. 42-28-3)

place for the "sponge" who does nothing but appropriate from the labor of others.

E. S. Lovesy—No, not unless they are more or less practical bee-keepers. Because they often through ignorance injure the industry by their bees becoming diseased, and by scattering the same. And they too often entirely demoralize the home market by offering a mixture strained from melted wax, pollen and honey, for any price, and, as with some people, everything is "honey" that is called by that name. Thus, when the bee-keeper comes along with the best that the market affords, he is expected to sell it for the same price as the inferior article.

The Honey-Harvest Morn.

BY MRS. J. W. SUTTON.

When the frosty winds have left us,
And green foliage decks our land,
And the countless million blossoms
Greet us like a fairy band—
Then with joy we greet the dawning
Of the honey-harvest morn;
And we hail the sweet alfalfa,
And the blossom on the corn.

For to us 'tis sweeter music,
Than the sweetest voice can sing,
Just to listen to the humming
Of the bees upon the wing,

As they gather in the nectar,
Tuck it safe for winter store.
And we do not blush to steal it,
If a dozen times or more
They with toil should fill the supers,
With the sections smooth and clear.
We appropriate their earnings
With a conscience void of fear.

Fear of law, but not of stingers,
For the plucky little bee
Can with stings defend its treasure,
That is very plain to see.
But when taken in the summer,
"Take it, hog!" they seem to say,
"We will work again the harder,
After the next rainy day.

"And will fill again our supers,
So that when the frost winds blow,
If you then would steal our treasure,
We stand guard all in a row.
And we'll sting with all our fury,
For it is our winter's store,
And if you should rudely take it,
We would search in vain for more."

—*Progressive Bee-Keeper.*

GENERAL ITEMS

Bees Doing Nothing.

Bees are doing nothing so far this year. We had a terrible freeze here March 24, everything being killed. There was not a drop of honey till May 15. I had to feed a number of colonies. I have not had a swarm yet. The bees are working in a few of the sections now.

A. BISHER.

Callahan Co., Tex., July 2.

Poorest Season of All.

We have had several poor seasons since 1890, but this season beats them all, as from nearly 100 colonies we have not had a single swarm up to date, while bees are driving out drones as fast as they hatch. We had almost constant rain in April, May, and part of June,

DR. PEIRO,
CENTRAL MUSIC HALL, CHICAGO.
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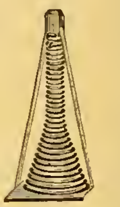
Queen-Clipping Device Free



The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 30 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

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BEES, HONEY, MONEY
Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.
J. P. H. BROWN, Augusta, Ga.
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OUR PRICES are worth looking at. We are making the new
Champion Chaff-Hive
with dovetailed body and supers, and a full line of other Supplies, and we are selling them CHEAP. A postal sent for a price-list may save you $$$$
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That covers the whole Apicultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his
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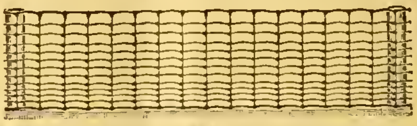

Whether Uncle Sam
should acquire new territory, we don't know—but WE seek conquests for Page fence in every zone. It is OUR POLICY, you know.
PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
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By Return Mail.
Queens.
Strictly 5-band or Golden Beauties. Untested, 50 cents. Tested, $1.00.
25A8t TERRAL BROS., Lampasas. Texas.
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Excursion to Chautauqua Lake
over Nickel Plate Road July 29 at one fare for the round trip. By depositing tickets with Secretary of Chautauqua Assembly, same are available for return passage within 30 days from date of sale. City ticket office, 111 Adams St., Chicago, Van Buren Street Passenger Station (on the loop.) Telephone Main 3389. (43-28-3)

and bees quit breeding during that time. There is no sign of their working in the supers as yet. If the fall flow is no better, we may have to feed to take the bees through the winter.

MAX ZAHNER.
Johnson Co., Kans., July 12.

Slow to Go into Supers.

I have 30 colonies in 16x20 hives, and think they are about the right thing in this climate. I have a few colonies that are doing finely, and some that are slow to go into the supers. I wish I could learn how to get them to start in the supers. I am working for comb honey, mostly; am also getting ready for extracted, as soon as I get enough to work in the top stories.

GEO. H. LAWRENCE.
Juneau Co., Wis., July 9.

Very Dry Time.

The season has been a very poor one for honey so far. White clover is all gone—mostly dried up, bees working but three days on it while it was in blossom. Sweet clover is drying up, and unless we get rain soon that, too, will soon be gone. Catnip seems to thrive in spite of the dry weather, but even that would do better if it had rain.

H. G. QUIRIN.
Huron Co., Ohio, July 14.

Bees Did Well.

Bees did well until a few days ago. Basswood is not yet in bloom.

CHAS. E. CRAWFORD.
Oscoda Co., Mich., July 10.

White Clover Scarce.

I have 12 colonies, which I will run for comb honey. I got but little honey from white clover, as it is very scarce. Basswood is just beginning to blossom, and I expect a good flow from that source.

JOHN V. BARKER.
Miami Co., Ohio, July 3.

Honey-Dew.

There is plenty of white clover here, but no honey. My bees are very strong. I had several swarms. I examined the bees last week, and took off about 100 pounds of "honey." O my! the blackest, nastiest stuff you ever saw—honey-dew of the very worst kind. But I will try again for a fall crop. I gave them a fresh supply of nice, new sections, and I do hope the next take-off will be nice honey, for I am fond of honey; but I can't go the honey-dew.

C. V. MANN.
Sangamon Co., Ill., July 10.

Bee-Keepers' Photograph.—We have now on hand a limited number of excellent photographs of prominent bee-keepers—a number of pictures on one card. The likeness of 49 of them are shown on one of the photographs, and 121 on the other. We will send them, postpaid, for 30 cts. a card, mailing from the 121 kind first; then after they are all gone, we will send the 49 kind. So those who order first will get the most "faces" for their money. Send orders to the Bee Journal office.

Illinois.—The annual meeting of Northern Illinois Bee-Keepers' Association, will be held at the Court House, in Freeport, Ill., Tuesday and Wednesday, August 16 and 17, 1898. All interested in bees are invited to attend.

B. KENNEDY, Sec., New Milford, Ill.

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To all who order the ***People's Atlas*** *of us* ***now*** *we will send* ***free maps*** *of Cuba and Alaska,* ***newly engraved*** *from the latest* ***governmental surveys*** *and* ***official information.*** *Size of each map,* ***14 by 22 inches.*** *The Alaska map accurately locates the* ***Klondike*** *country and other* ***great gold-fields*** *in that far-off land, and the* ***routes*** *by which they are reached. A brief* ***history*** *of each* ***country*** *accompanies the maps.* ***See our offer below:***

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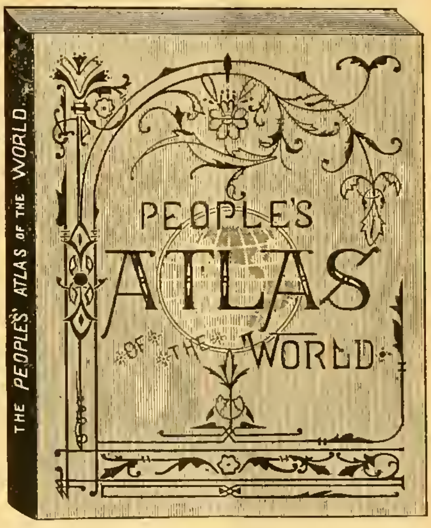
THE UNITED STATES. — This Atlas gives the Popular and Electoral Votes for President in the years 1892 and 1896, by States. List of All the Presidents, Agricultural Productions, Mineral Products, Homestead Laws and Civil Service Rules, Statistics of Immigration, Public Debt for the Past 100 Years, Gold and Silver Statistics, Postal Information, and Other Information that should be in every Home, Store, Office and School-room.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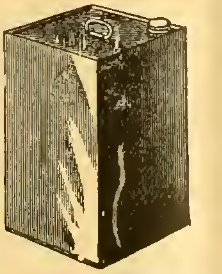

Finest Alfalfa Honey!

IT SELLS ON TASTING.

The Honey that Suits All Who Buy It.

We can furnish **White Alfalfa** Extracted Honey, in 60-pound tin cans, on board cars in Chicago, at these prices: 1 can, in a case, 7 cents per pound; 2 cans in one case, 6½ cents; 4 cans (2 cases) or more, 6 cents. The Cash MUST accompany each order.

☞ A sample of the honey will be mailed to an intending purchaser, for 8 cents, to cover postage, packing, etc. We guarantee purity.

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Sweet ◆ Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order·

	5℔	10℔	25℔	50℔
Sweet Clover (white).	.60	$1.00	$2.25	$4.00
Alsike Clover.........	.70	1.25	3.00	5.75
White Clover..........	.80	1.40	3.00	5.00
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Crimson Clover.......	.55	.90	2.00	3.50

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Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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118 Michigan Street, - CHICAGO. ILL.

The **BEE-KEEPERS' REVIEW** has added a new feature. It is called the

Department of Criticism.

It is conducted by Mr. R. L. Taylor. of Lapeer, Michigan, who is a fair minded man and a broad thinker. To this may be added years of experience in a large apiary. He also, for several years, had charge of the Michigan State Experiment Apiary, and made some of the most practical experiments ever made with bees.

Attempts at criticism are often coucht in language so apologetic and "mealy-mouthed" as to nearly rob them of all force; but Mr. Taylor's criticisms are most vigorous in style, and, thus far, his main shafts have been aimed at the views and teachings of some of the most prominent writers. It is my honest belief that this department is to result in untold good by warning bee-keepers against the fallacies that will creep into the journals in spite of the best of intentions.

The editor of the "American Bee-Keeper," a man who has had years of practical experience with bees, writes me that "That new Department of Criticism is a rare morsel." In his journal he gives it the following public notice:

"In addition to its intensely critical condenst view of bee-writings, by E. E. Hasty, together with other markt improvements, the BEE-KEEPERS' REVIEW has introduced a new 'Department of Criticism.' The initial C of the department heading incloses a miniature medallion half-tone of Hon. R. L. Taylor, of the Michigan State Agricultural College [He is not connected with the College now.—Ed. REVIEW], by whose very able pen the criticisms are conducted. The REVIEW is indeed a unique publication—a credit to its editor and an honor to its supporters; and, in point of interest to advanced apiarists, its new department is second to none of those previously establisht. We are proud of our sprightly, artistic, and edifying exchange."

SPECIAL OFFERS.

The REVIEW is $1.00 a year, but I am putting forth extra efforts for the sake of getting NEW subscribers, and to any one not now a subscriber I will, for only $1.50, send the REVIEW one year and a fine tested Italian queen; or for $3.00 I will send the REVIEW one year and 1,000 first-class one-piece sections. The sections will be shipt from any of the following points: Flint, Mich.; Chicago, Ill.; Jamestown, N.Y.; Higginsville, Mo ; Omaha, Neb , or Medina, Ohio.

W. Z. HUTCHINSON,
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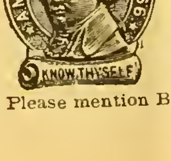

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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, July 7.—A little of the new crop is coming, and it sells at 11 to 12c for the best grades of white comb. No ambers at present on the market. Extracted is coming freely from the south, and a little from the West; white brings 5 to 7c; ambers, 5 to 6c. Beeswax, 27 to 30c.

We do not look for a settled price on honey before September; meantime the offerings and demand will be limited to immediate wants. R. A. BURNETT & CO.

Kansas City, July 9.—New comb, No. 1, white, 11@12c; amber, 10@11c. Extracted, white, 5@5½c; amber, 4@4½c. Beeswax, 22 to 25c.

Old stock of honey all cleaned up. Few shipments of new in market.
C. C. CLEMONS & CO.

New York, July 9.—Comb honey: We closed out all of our old crop some time ago. We have received several lots of new crop from the South, good, No. 1 white, which sells readily at 11c per pound.

Extracted: Receipts of new crop from the South are large. We quote: Common, 48 to 50c a gallon; good, 52 to 55c a gallon; choice, 5 to 5½c pound. Demand is good, especially for the better grades Beeswax remains firm at 28 to 29c. HILDRETH BROS. & SEGELKEN.

Boston, July 9.—Fancy white in cartons, 13c.; A No. 1 white in glass-front cases, 11 to 12c.; No. 1, 10 to 11c; No. 2, 8 to 9c. Extracted, white, 6 to 7c; light amber, 5 to 6c. Beeswax, pure, in good demand with very light supply, 30c.

At the present time the demand for both comb and extracted honey is very light with but little stock on hand.
BLAKE, SCOTT & LEE.

San Francisco, July 9.—White comb, 8½ to 10c; amber, 6½ to 7½c. Extracted, white, 5½@6c.; light amber, 4¾ to 5¼c. Beeswax, 23@25c

Small quantities of the new crop have been offered by sample, but nothing of consequence has been yet done in the same. There will be very little white sage honey this season, but a moderate amount from the alfalfa and tule districts. Values remain as previously noted.

Detroit, July 9.—Fancy white honey is lower and now quoted at 11c. No. 1, 9@10c; fancy dark, 7@8c; No. 1 dark, 6@7c. Extracted, white, 5@6c; dark, 4@5c. Beeswax 27@28c.

There are no changes in quotations, and very little desirable honey left. Sales are so slow that it is difficult to quote. The poor lots are being pusht at what they will bring.
M. H. HUNT.

Minneapolis, July 9—Honey much more encouraging. Fancy white clover comb is selling here now at 10½@11½c. Not advisable to ship darker than amber. Extracted fancy white clover, 5½@6c; amber, 5c; dark, 4@4½c.

Outlook for honey much more encouraging.
S. H. HALL & CO.

Indianapolis, July 9.—Fancy white honey 11 to 13c.; No 1, 10 to 11c.; fancy amber, 9 to 10c. Extracted, white, 5 to 6c. Beeswax, 25 to 27c. Market appears to be well supplied and sales are rather slow for this time of the year. This is especially true of the amber and dark grades of comb honey. Beeswax is in good demand. WALTER S. POUDER.

Milwaukee, July 14.—Fancy 1-pound sections, 11@12c; A No. 1, 10@11 cents; No. 1 8@10c; amber, 7@7½c; dark and old, 6@7c. Extracted, in barrels, kegs or pails, white, 6@6½c; dark and amber, 4@5c. Beeswax, 26@28c.

Since our last the sales of honey have not been large, altho a fair demand has existed and continues, altho the fruit consumption makes some difference with eaters of honey. There is not a very large supply of old stock left, and we shall be in good order for new crop both extracted and comb. The outlook is good, A. V. BISHOP & CO.

Buffalo, July 9.—There is a very good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

St. Louis, July 9.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.
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38th Year. CHICAGO, ILL., JULY 28, 1898. No. 30.

CONTRIBUTED ARTICLES

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PROFITABLE BEE-KEEPING,
WITH
HINTS TO BEGINNERS,
BY
C. N. WHITE, OF ENGLAND.

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

No. 4.—SWARMING.

During the months of May, June and July the bees in all properly-managed hives become. very numerous, and so crowded, particularly in hot weather, that they cluster around outside the hive, and hang in a large bunch from the entrance, unless more room is given by means of supers or by enlarging the brood-nest. This clustering outside is the usual and almost certain sign of swarming-time being near.

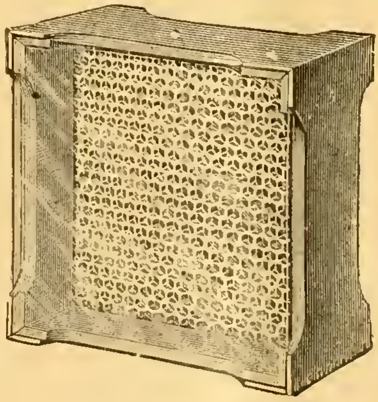
A swarm, composed of the queen and a few thousand workers and drones, leaves the hive, and, after filling the air for a few minutes generally forms a pear-shaped mass on the branch of a tree close by. Unless the bee-keeper happens to be at hand, the swarm may be lost to him, for in all probability scouts sent out previous to the swarm, lead the merry throng to a new home which they have prepared in a hollow of a tree or elsewhere. Should that be the case, if they do not go direct without clustering, they are almost certain to do so after becoming settled, unless they are quickly hived into a clean straw skep, preparatory to being put into a hive of more modern pattern. If the swarm is allowed to remain clustering for some hours, hiving becomes a difficult operation; for, altho when swarming, bees are good-tempered, they soon become irritable if left in the sun; therefore, hiving should take place as soon as possible after the cluster has been formed. Many bee-keepers suggest the advisability of hiving swarms in the evening: this advice must refer to the re-hiving, because unless the swarm is secured as advised above, it may, and most likely will, decamp. After it is safely hived it is immaterial whether it is put into a modern hive then or in the evening; but certainly to ensure success the latter is advisable, as during a hot summer day the swarm, after being disturbed, is more likely to take to flight than it is when hived, or rather re-hived in the evening.

Swarms leave the hive into which they are first placed either because they have chosen another home, because they are left in the hot sun, or because the hive is daubed inside with some vile concoction with the idea of inducing the bees to accept their new home. If a swarm leaves the hive into which it is placed in the evening, it must be from one or the other of the above-mentioned reasons, or it may, and most probably is, due to the fact that it is a second swarm or cast. Casts are headed or accompanied by virgin queens, which must leave the hive to meet with the drone, and when they issue the bees often accompany them. Sometimes they all return with the queen from her wedding-trip, but it rarely happens that once a cast leaves the new hive it again returns to found a colony. The only satisfactory method of preventing this exodus and frequent loss of the swarm is to put into the hive, when introducing the bees, a frame of brood from another hive. Bees very rarely desert brood, and the presence in the hive of such a frame would doubtless keep the bulk of the bees at home when the queen left the hive.

NATURAL INCREASE.

As soon as the flowers begin to bloom early in the new year activity in the hive commences; and a slight examination of the center combs on a warm day will reveal patches of brood in the center of the combs. The queen commences laying slowly at first, but if the brood-chamber is not too large—that is, if there are not too many combs in it, and it is well protected from changes of outside temperature—a gradual increase in the number of eggs laid daily will be maintained. But if there is a scarcity of food, only a regular supply given by the bee-keeper will have this desirable effect.

The queen lays eggs for the first few months that produce workers only: then, as soon as the hive is becoming crowded, she lays eggs in the larger, or drone, cells from which issue in 25 days drones. The appearance of drones is the first sign of the busy season, and should be taken as the guide for the time when hives for swarms and supers for honey should be prepared.


Section Fitted with Foundation.

When the bees in the hives have become so strong in numbers, it is almost certain that honey is coming in freely, and therefore, if it is honey and not swarms that is required, some kind of receptacle, that is, a super, must be put above the brood-chamber in which the surplus honey may be placed. If, however, room for the surplus honey gathered is not provided by giving extra chambers, the cells of the combs in the brood-chamber will be filled with honey instead of being used almost solely for brood-rearing. The effect of this is that if swarming is not thus caused the colony is spoiled, as the empty cells become less and less in number until the queen is "crowded out" altogether; that is, she has really hardly any cells in which to deposit her eggs. At the end of the season such a colony will contain a large quantity of honey, and a small lot of bees, most of them being then too old for many to be left for spring work. It is therefore of great advantage to give supers, for tho they do not at all times prevent swarming, the carrying of surplus above ensures that the combs in the brood-chamber are left for the use of the queen; consequently, the conditions enumerated above are reverst. The brood-chamber contains little honey, but a large colony of bees, most of which will be young ones, and just what are required for successful wintering and satisfactory work in the spring.

It is most desirable, if swarming is to be prevented, that laying-room should always be provided for the queen. This is usually secured by the giving of supers at the commencement of the honey-flow, so that the surplus honey is not stored in the brood-combs below. But if, after this precaution, swarms do issue, it is invariably due to the fact either that the formation of queen-cells in preparation for swarming had been commenced before the super was given; or that, tho the bees may have commenced to store honey in the super, they have been compelled by a change of weather to leave the super and crowd in the brood-chamber. thus producing the generally acknowledged cause of swarming. Certain it is that if from either of these causes crowding in the brood-chamber occurs either before or after the super has been given, the issue of the swarm is seldom prevented. If an increase of colonies is not desired, a thorough examination of the combs should be made, and the queen-cells, if any, removed. At the same time the exchange of combs for sheets of foundation may stop the inclination to swarm while the honey-flow commences, or until there is a recurrence of fine weather.

When an undesirable swarm has issued it should be hived and left until the evening, and then returned to the hive where, during the interval, a rearrangement of the brood-chamber has taken place, and additional supers if necessary have been added.

HIVING SWARMS.

Swarms settle in various places from which they are sometimes with ease dislodged, while on other occasions a little skill and some ingenuity must be exercised before they are safely settled in the hive.

All swarms should first be put into a clean straw skep. If a swarm has settled on the branch of a tree a sharp jerk will be sufficient to cause the cluster to fall into a skep held beneath. The bulk of the bees will fall into the skep, which must then be turned gently over and set on the ground, one side being raised by a brick, or something about that size. A good entrance will thus be given, and it is necessary, because at swarming-time the heat of the cluster is very great, and ample ventilation is essential.

Great care must be exercised in hiving, so as to avoid crushing a bee, for if the queen be killed the bees will return to the hive from which they issued, while if a worker be crusht, and the poison-bag ruptured, the smell of the poison will irritate the other bees, and cause them to sting. Sometimes after being put in the skep the bees again leave and return to the spot where they had clustered. In all probability this is due to the queen not being shaken with the bees into the skep. She may be remaining behind, or have dropt on the ground; if the latter, her presence will soon be ascertained by several bees clustering on the ground around her. If she is not on the ground, hiving must be repeated. Another reason for swarms deserting hives is that they are left in the sun. Being naturally in a high temperature, when under such excitement, they are unable to bear the great heat their exposure to the sun causes.

When a swarm has been hived the skep should be set down on the shady side of the tree upon which the hive clustered, or if that is not possible a white sheet should be thrown over it.

The hive may be moved as soon as the bees have clustered inside, to the spot where the swarm will remain for the rest of the season. Re-hiving—that is, the turning out of the swarm from the skep and running the bees into the hive they are permanently to occupy—had better take place later in the day; because if disturbed while the sun is hot they may refuse to enter the other hive, and fly away altogether.

Old-fashioned bee-keepers daub the inside of the skep, before hiving the swarm, with a vile concoction of beer and sugar, or some other sweet, sticky substance, with the idea of keeping the bees in the hive. Such an uncomfortable plan is more likely to cause the bees to desert the hive, as when they are shaken in their wings become sticky and many lives are sacrificed. Such a practice should be discontinued.

[Continued next week.]

Bee-Paralysis—Attempts at Curing It.

BY ADRIAN GETAZ.

In answer to Prof. Cook's inquiry on page 376, I will give a brief description of the result of my attempts at curing bee-paralysis.

In the first place, I want to state some of the peculiarities of the disease. Considering the individual bees, the disease develops very slowly; the first symptoms are the peculiar twitching so often mentioned, then a sort of slowness of movements. This increases gradually. By that time the affected bee begins to lose its hair, and finally becomes completely hairless and shiny, the stiffness gradually increasing until the affected bee leaves the hive, to drag itself on the ground until death terminates its existence. I will add that the twitching ceases about the time the falling of the hair begins. As to the duration of the disease, I cannot tell, it depends how badly the bee may be affected, and at what time of its life the disease was contracted. We may say, however, that several weeks elapse during the evolution of the disease.

As to the colony itself, it also depends how badly it is affected. The disease develops worse during the winter, and when the spring comes the majority of the bees composing the colony will have reacht the hairless stage. In consequence of the weakness of the diseased bees, more or less spring dwindling follows. Nevertheless, in most cases a start at brood-rearing is made, and by and by young, healthy, or at least comparatively healthy, young bees appear in the hive and gradually take charge of the institution. Eventually they see that something is wrong with the old bees, and expel them. By that time the apiarist, not seeing any more shiny bees, thinks the disease is cured. Nevertheless it is not. A close inspection will reveal here and there a twitching bee, and now and then some sick bees expelled by the others. These are invariably thought to be robbers, unless the apiarist is fully posted. There is, however, a difference between the appearance and the quick movements of a robber-bee and those of a diseased bee.

During the summer very few bees, if any at all, reach the hairless stage, either because they are expelled before reaching that stage of the disease, or because they die of natural causes before the disease has fully developt.

In badly affected colonies it may happen that the young bees contract the disease so rapidly that they fail to expel the old ones, and carry out brood-rearing and other work. Such colony, as a rule, dies in the course of the year or during the following winter.

The queen does not seem to contract the disease very early in her life. The first effect seems to be a diminution of her laying powers; this leads to her superseding, which almost invariably occurs during the second year of her laying. If, however, the season is bad, and very little brood can be reared, she may become so diseased as to lay infected eggs. In such case trembling and twitching bees can be seen hardly more than a few days old. In the absence of a microscopic investigation, I cannot prove that the queen lays infected eggs, but the following case seems to show it conclusively:

I had a colony in that fix, that is, showing the disease in very young bees. The colony was pretty strong yet, the honey-flow and temperature favorable, so, as an experiment, I replaced the queen. Nothing else was done. By and by the progeny of the new queen hatcht, but did not show the disease at all at the beginning. Eventually the young bees were numerous enough to expel all the old ones, and now the colony is neither worse nor better than the others.

I first tried to feed salicylic acid, but I could not feed it long enough to get satisfactory results. During a honey-flow the bees will not take it; during a dearth it is difficult to feed without starting robbing. I did not want any to go in the surplus. I thought of fumigating, and then of putting some medicated substances easily evaporated in the hive, so as to make the fumigation automatic.

I tried carbolic acid and camphor. I put them in the hives in the fall, and renewed them two or three times during the winter. The effect was marvelous. When the spring came not a shiny bee could be seen, and the colonies were strong and healthy. The diseased bees that went into winter quarters were probably dead. But to my sorrow, the diseased, twitching bees began to reappear about six or eight weeks after the use of the camphor or carbolic acid was discontinued. Applied in summer time the effect was the same. While the camphor is there the disease will not show itself, but will invariably reappear six or eight weeks after its use is discontinued. The inference is natural, that the fumes of the camphor or carbolic acid are strong enough to prevent the development of the spores of the disease, but not to destroy them.

During the last five years I have used camphor every winter, and invariably with the above results. As a rule, I do not use it in the summer, because it gives the honey a slight taste and odor, enough to spoil the sale of it.

Sulphur is not good. In light doses it has no effect; in strong doses it kills a number of bees. The sick ones being the weakest are sure to die, and then the operator not seeing any more shiny bees, imagines that he has cured the disease.

Changing queens, introducing young bees, etc., all have the effect of increasing the number of young and comparatively healthy bees, and hastening the expelling of the old ones. At any rate, no queen should be allowed to get old enough to become seriously diseased herself, and a yearly re-queening is considerable advantage.

It is not necessary to send for outside queens. The queen bought elsewhere will contract the disease before long, and will be disabled nearly as soon as one reared in the apiary.

Knox Co., Tenn.

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Tobacco Smoke for Bee-Paralysis.

BY D. W. LIGHT.

On page 376 apiarists are askt to give their experience with bee-paralysis. I divided a colony about the last of May, last year, and in about two weeks afterward they began to die—first the old bees and then the younger ones, until in front of the hive there would be a handful or more every day. Finally I called an old bee-keeper's attention to them, who said it was the worst case he ever saw, and advised me to sprinkle the bees and comb with salt water. I applied the salt water about 4 o'clock in the afternoon. That night they were all over the ground for a rod or more around the hive, making a terrible noise. The next morning it lookt as if they were all dead. The queens were very prolific, and there was plenty of nectar.

I waited two or three days, and the disease did not abate. Then I thought to experiment. I fixt up the smoker, put in plenty of leaf tobacco, and took out the frames one at a time, and held them in the air and sun for one minute each, and smoked them thoroughly once a day for a week, when it had entirely disappeared.

This last treatment began to check the disease from the start. I do not know which one did the work, or whether all were necessary. The next time I will try each one separately and be satisfied as to which to ascribe the curative properties.

I have noticed in the Bee Journal that the only remedy bee-men mention for the disease is to give a new queen. I think it would be wrong, as you would weaken the colony, and the queens never show any symptoms of the disease. The two cases I treated are as strong colonies as I have in my yard of 11; they are all doing finely, with a good flow of honey.

Neosho Co., Kan., June 16.

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Lime and Salt-Water Cure for Bee-Paralysis.

BY J. A. GOLDEN.

On page 376 Prof. Cook asks for information on the treatment of bee-paralysis.

A few years ago I had an experience with the so-called "bee-paralysis" which I will never forget. That experience was publisht in Gleanings in 1893. I predicted that the time was near at hand, if the disease were not checkt in its spread, bee-keepers would have cause to look for other occupations. That prediction is being verified throughout the milder climates, and is experienced to some extent in the colder as well.

I have never been able to give more than a guess, or supposition, as to the cause of the so-called bee-paralysis, and I have been successful in curing every colony treated by the chloride of sodium method, while others report a failure by this method. As it happens, I have two cases in hand that may have some bearing on the question, and for the information of others, I will give it here.

Having a queenless colony early in the spring, I sent South and procured a queen, introduced her, and in due time the colony became strong numerically. It may seem strange to the reader, but nevertheless true, I was glad to find those bees badly infected with bee-paralysis, many of the bees having a dirty, black, greasy, starved look. (What next?) Well, I just let them alone till hundreds were being dragged out of the hive by the bees, and then what did I do? Well, I want to say to Prof. Cook, that I lifted all those frames out and gave that hive a complete scrubbing with a strong brine; then, while damp, I put a handful of air-slackt lime in the smoker and gave the inside of that hive a complete dusting. I then took the atomizer and thoroughly sprayed the bees, combs and all with a solution of salt water, tasting quite a little salty. I replaced the combs and bees, and in three days gave them another spraying, this time by lifting off the cover and spraying down between the combs. In five days I gave another spraying, this being June 18. That colony now has a super of 24 sections of honey nearly ready to come off, and I defy any bee-critic in this broad land to discover a bee in that colony infected with paralysis, or any signs that it ever had been infected.

The other case was a colony placed next to the colony above described, which was treated likewise, and bears the same recommendations. Those are the only cases in which the lime was used in connection with the brine—that is why I was glad, so as to test the lime in connection with the brine.

Morgan Co., Ohio, June 20.

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A Rejoinder on Facing Comb Honey.

BY G. M. DOOLITTLE.

I have been much amused and somewhat surprised at the apparent general desire to "roast" Doolittle on the "gridiron of Christian opinion" regarding what he said on pages 174 and 175 of Gleanings for March 1, 1898, relative to facing comb honey. I have askt myself over and over again, why those quoting from that article withheld from the public the way Doolittle *did* crate honey, and advised others to crate it; also what he said or intimated would be the result if I crated in any other way, or by any other plan than the one given in that article.

It would be as easy to prove by the Bible that any and all men and women should hang themselves, as it was to prove that Doolittle believed in facing cases with fancy honey, white honey, and then fill up the center of each case with off grades of white or buckwheat honey. And yet the way it was put to the commission-men, and the way the quotation has been sent out before the world, would lead any reader of the matter who had not read the article in which it appeared in Gleanings, to think that Doolittle really did advise putting up comb honey in accord with the quotation, when the whole import of the article shows otherwise.

To be sure, I said it would not be "*dishonest*" to put up honey where it was *sent on commission*, with white facers and dark inside, and I note that only two out of the twelve commission-men who reply, attempt to make any claim to dishonesty, and one of the two does not say that *he* thinks such would be dishonest, but that some of his customers to whom he sold such honey as *white honey* "considered it dishonest," and that is just the claim *I* have made under like circumstances. Some of the commission-men took pains to say that such packing as the paragraph quoted allows, would be "right," and could not be considered "dishonest," thus perfectly agreeing with the position I took, and in all the discussion brought forth I have failed to find a single word of proof that would shake the position I took. Hildreth Bros. & Segelken come out frankly and say, "We admit that any bee-keeper has the right to crate his honey, face or mix it, just as he chooses," and it is conceded by all, that what any person has a *right* to do, cannot be *dishonest*, for there is nothing right in dishonesty.

Then these same commission-men hint at the great underlying point in the whole matter, where they say that people were not so much acquainted with comb honey a quarter of a century ago as they are to-day, in which they really admit that what might be considered by some dishonest to-day might not have been so considered when the older bee-keepers first began the pursuit and sold their crop as a *whole*, or just as it "came off the hives," as is so aptly put by R. A. Burnett & Co. And if it was not dishonest to put up honey just as it came from the hives 20 to 25 years ago, when did it cease to be honest and begin to be dishonest? This reminds me of some saintly persons who think it perfectly right to play croquet, but hold up their hands in holy horror where the same parties engage in a game of cards.

But on one point we all agree, and had the very next sentence of my Gleanings article been quoted there would have been *no* discussion, for immediately following the last words of the quotation—"and the producer thought it to his interest to do." As found on page 371, American Bee Journal, I tell every reader of that article that "I should doubt the wisdom of such a course;" which was the same as saying that it would not be desirable, financially or otherwise, for a man to ship his honey with No. 1 facers, and fill in the center with dark honey. In no way, except along the lines of honesty, when sent on commission, did I "defend facing or improper grading," as one party claims I did, and should never have written the paragraph going the rounds of the press, only to combat the idea put forth by Mr. Snyder, that improper grading was the cause of the low prices of honey as compared with former years, during which years honey was rarely graded at all by the majority of bee-keepers.

My saying that I should doubt the wisdom of facing or improper grading of honey ought to have stopt all cavil at once. But, on the whole, I am very glad I wrote as I did, and that this discussion has followed; for, through the discussion, very much along the line of education regarding the crating of honey has been brought out which otherwise would never have seen the light. My shoulders are broad and strong, and if the pounding of me (or even vituperation, as indulged in by "Skylark") will bring out something of use to the world, I can but rejoice. Onondaga Co., N. Y.

[We notice in the foregoing that Mr. Doolittle thinks that if we had quoted all he wrote for Gleanings on the subject of facing comb honey, "there would have been *no* discussion." Then we wonder how it comes that in the very same paper where Mr. Doolittle's article appeared *in full*, there was such a hot discussion, and "roasting" of Doolittle, that the editor of Gleanings cut off discussion in that paper.

The weak point in Mr. Doolittle's defense is where he emphasizes the words "*sent on commission*," just as if that made any difference as to the honesty of the action. To our mind that makes it so much worse, for then the commission-man is made the scapegoat.

To face comb honey for market is *wrong*, every time and everywhere.—EDITOR.]

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Management for Extracted Honey.

BY JOHN NEWTON.

In running an apiary as I do, partly for comb and partly for extracted honey, I usually select the strongest and best colonies for comb honey, and the rest are run for "extracted." When the spring work has been done—such as clipping queens' wings, etc, and before the honey season opens—I see that my extracting-combs and supers are clean and in proper condition for the honey season. My supers are the same size as the brood-chambers, only one comb less is used; eight combs 8¼x16¼ comprising my extracting super.

As the season opens, my supers and queen-excluders are brought from the store-room, the smoker is lighted, and the bees smoked, the excluder placed over the brood-chamber, and one super is put over the excluder on all colonies to be run for extracting honey, and are strong enough to need room. After the honey-flow fairly opens I make it a rule to see what is being done in the supers, or colonies not yet having extra room, so that if more room is needed it may be given at once. I never allow a shortage of room for storing. In doing so, two objects are sought: One is to discourage swarming from over-loading, and the other is to receive the greatest amount of surplus honey. I run all colonies two stories high. When super No. 1 is about two-thirds full, it is raised and super No. 2 placed under it.

I might here say for those who have not so many spare combs, that it can be workt by extracting one-half of the combs at a time, always placing the combs with the most honey to the center of the hives. By doing this, you will get well-ripened honey, and it does not allow the bees to be over-crowded or in need of store-room.

As the season advances, and in four or five days after you have placed on the second super, super No. 1 will be ready for extracting, but here let us be sure that our honey is well ripened before extracting. We all know that nectar which the bees collect from the flowers is thin and watery, and must be fully evaporated to make the best honey. The bee-keeper should be equally wise and not extract his honey until it is capt over. This requires a little more labor of uncapping, but then we get honey far superior, and the wax for our trouble. We do not want honey that has been ripened artificially. All honey should be allowed to ripen in the hives; the honey will have a better body, and is superior in flavor.

Now we must see that our extracting and store rooms are in good order—everything clean and tidy. When visitors come to see me I never feel ashamed to show them into my extracting-room; I know they will not be disgusted and depart saying, "I do not want to eat any extracted honey if every bee-keeper is as dirty as Newton; it is not fit to eat."

I have seen extracting-rooms all daubed and sticky, and the bee-keeper also. Let us put a good, clean article on the market and command a good price. Have our extracting and store-rooms in good order, the extractor placed in position on a box or bench in good order, and high enough to let a pail under the tap; the honey-cans the same in the store-room with the strainer secured around the top; uncapping-can placed in position, knife sharp, dish of warm water to place the knife in when not in use uncapping, which will assist much in the work.

My uncapping-can is just an oblong box with a bent tin so as to drain the honey to one end and run it in a dish. My screen for holding the cappings is one of the screens of my solar wax extractor. When the screen is full it is placed in the solar, and another one put in its place, and if it is a nice, sunny day the same night we will have no cappings to wash for vinegar, but they will be into nice yellow wax, and the honey which was in them can be placed in the store-can none the worse for going through the solar.

Now, when everything is ready—the comb-box, wheelbarrow, and the smoker going good—I proceed to the bee-yard and go around to those hives from which I wish to extract, placing the entrance-blocks on, and giving a few puffs of smoke. This will cause an excitement, and warm up the honey, and will greatly aid in extracting. We must be cautious not to give too much smoke, which injures the flavor of the honey. Now proceed to that part of the yard at which you wish to start, and after giving a few more puffs of smoke in the top, tear off the quilt and take out one comb, placing it at the entrance so as to give more room in the hive to shake and brush the bees from the combs, and prevent killing and making the bees angry, placing each comb as the bees are cleaned from them into the comb-box. After all combs are out, close down the hive, remove the entrance-blocks, and proceed to the extracting-room. Uncap and extract.

A little caution must be taken in turning the extractor: Start slow, gradually getting up speed, and there is not much danger of breaking the combs. After extracting, place the combs to one side until evening, then replace them on the hives. If I was working, as I mentioned before, extracting the half super at a time, I would carry a set of combs with me and replace them as soon as the full ones are taken out. After the day's extracting is over, and all honey is run into store-cans, cover up the extractor, uncapping-dish, etc., so as to keep them clean until needed again; and thus I work on until the honey season is over. During the last extracting the bee-tent is usually brought into use to prevent robbing.

After the extracting season is finally over, and all combs extracted, they are piled three high on hives, with a quilt between the brood-chamber and supers, with a corner turned back to allow the bees to clean them up, or, if placed in the yard some distance from the bees, tiered up, the combs spaced to allow bees access to them, they will soon clean them up. But I prefer the former way, as it does not cause the same excitement. After combs are clean and sweet, they are again placed in the store-room with a sheet of paper between each, until they are wanted again the following spring.—American Bee-Keeper. Ontario, Canada.

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Shallow-Scallopt Sections in Tiering-Up.

BY EDWIN BEVINS.

Allow me to say to "Arkansas" (page 422) that his trouble about tiering-up arises from the fact that he uses sections which are not scallopt deep enough. When two sections such as I use are placed side by side, the scallops make an opening of ⅜ inch. If separators are used that come up even with the tops of the sections and divide this passage there is, of course, a ¼ inch bee-space on each side of the separators; and this is ample for the bees to work through. With shallower scallops I have had some of the trouble that "Arkansas" complains of.

I cannot quite agree with Dr. Miller that it is no great matter if the bees cannot go up freely between the outside sections and the side of the super. It is a waste of time for bees to travel around to the other side of the section in order to get above, and there are times when time is honey as well as money. With a ¼-inch space at the sides the bees seem to go up freely.

The Doctor's answer to "Arkansas'" second question shows that he misapprehended his meaning. It was not the space between supers that bothered "Arkansas," but the space between the upper edges of the separators and the scallopt edge of the section. "Arkansas" can get around his trouble by using sections with deeper scallops, and also by using separators scallopt on their upper edges.

Decatur Co., Iowa.

How to Prevent Swarming—And at the Same Time Get the Largest Yield of Honey.

BY J. E. CRANE.

Well, now! That heading looks like a good one. The only difficulty, so far as I am concerned, is that I do not know just how to do it; *i. e.*, with every colony. To be sure, I can remove the queen from every colony that I find preparing to swarm, remove queen-cells, etc., to the end, but I may not in this way get the largest yield of honey; besides, how about such colonies as swarm without so much as an egg in a queen-cell, and evidently without thinking about it more than 15 minutes?

Again, we may shake a colony from its combs and give it an empty hive; but this does not always work, as I have had them swarm under exactly these conditions; besides, our vision of finisht surplus grows less very rapidly with this treatment.

Another way is to produce a non-swarming strain, or breed, that we can depend upon, that will keep right on storing honey to the close of the season without a thought of swarming; but as it may take from 50 to 100 years, or perhaps much longer, to produce such a breed, it does not seem altogether practical, especially to us whose locks are turning gray. But this does not prevent us from doing what we can to develop such a strain of bees. If but partially developt, it would help in a degree. That some method is necessary is evident from the short time in which bees can gather surplus honey. In this section of country about four weeks is a full average. Now, if the brood-chamber is filled with honey at the end of the first week, and during the second week a swarm issues, it will be well on to the fourth week before this colony will be strong enough to go into boxes again to much purpose, and this leaves only a few days for filling our clean white sections. Our new swarm will require from one to two weeks to fill its hive; and will be ready to go into the surplus department just in time to start its combs, and then, as the flow is over, coat its sections with propolis.

There are some non-swarming devices, but as they have not seemed to me practical, I shall not speak of them. But what *is* to be done? Something must be done, or, in most seasons we shall get little surplus honey and much increase. We have all observed, or most of us have, that what will break up one "broody" hen will not another. You can frighten one from her nest and she will scarcely return to it again; while with others you can take them off and they *will* "set" on a board or on the floor, or even on their roost. You may imprison them for several days, and when you liberate them they will go back to "sitting" on sticks or stones with the most provoking stupidity. It is thus with our bees; what will cure the swarming-fever in one colony will have but little effect upon others. With one you can cut out the queen-cells nearly ready to seal and they will give it up; with another colony it is of no use whatever.

The presence of a large amount of brood in the hive appears to be the most exciting cause of swarming. This leads me to the first method of preventing swarming. I remove every brood-comb and replace them with empty combs, or at least those having no brood. While a little honey seems to do no harm, a little brood given them or left in their hive may upset our best intentions; for the colony is apt to start queen-cells upon it and then swarm. The brood-combs that are removed can be given early in the season to any weak colonies, and thus quickly bring them into a profitable condition, while the colony that would have swarmed, finding its brood gone, usually gives up swarming at once and goes to work with a will, quickly filling the brood-chamber with honey, and a moderate amount of brood, and is again at work in the boxes. This plan works well about nine times in ten, when perhaps the tenth time they will start brood and queen-cells at once, and out they swarm. This tenth time is apt to be where a swarm, or part of one, has gone into our colony before we operated on them. Strong colonies only should be treated in this way, as having no hatching brood in their hive they soon become weakened.

Another class of colonies, such as have a very moderate amount of brood, or an old queen, or one we wish to supersede, we open their hive and remove the queen, if we can find her, and cut out the queen-cells. Eight days later we again cut out queen-cells; and in from four to eight days more give them a young virgin queen. If she is young enough, she is usually accepted and soon laying, and as the brood from the old queen keeps hatching until near the close of the season, it remains strong and does quite a fair business. If we fail to find the queen we cut out all queen-cells every eight days to the end of the season, and the queen usually disappears before that time, so we can give them a virgin queen.

But there are many colonies that have young, vigorous queens of the previous season that we do not wish to destroy, and we have not a sufficient number of dry combs to give them. These we treat in another way. Finding the queen, we remove her with a brood-comb, one from which the young bees are just hatching, if possible, and place the comb with another having considerable honey and one having a little honey and no brood in a new hive, and after shaking off bees enough from the combs of the hive from which the queen was removed to make a good nucleus, when the old bees have returned to the parent hive, we close it up, after making sure the comb of brood we gave it has no queen-cells. We remove all queen-cells from the hive from which we removed the queen, that are likely to hatch within eight days. Of course we return the partly-filled sections, and in eight or nine days we again cut out all queen-cells, and later give a virgin queen, the same as we did to the colonies whose queens we destroyed. This plan keeps us very well supplied with young queens.

In eight days we again go over our colonies, giving the strongest ones preparing to swarm a full set of dry combs in place of their brood-combs, and give these brood-combs to the nuclei formed the previous week, thus quickly building them up into profitable colonies that will sometimes give as much surplus as the colony from which they were started. Italian bees are at their best when placed in small nuclei; they give up all thoughts of swarming, and seem to store two or three times as fast in proportion to their numbers as when in full colonies.

I am apt to find some queenless colonies near the close of the season. My young queens are frequently several days old before I get around to introduce them, as I have several yards to look after. Then there are some that get mixt, and a part of the bees appear to want an old queen and a part a young virgin, and so, like some families that pull in different directions, neither get what they want. These I give two or three brood-combs, and they usually come out all right. Some apiarists return old queens to hives that have been unqueened, but I have never succeeded in returning them satisfactorily.

In removing queen-cells I select the best and place in nurseries to hatch, and thus keep myself well supplied with virgin queens of good quality.

While the plan above outlined does not wholly prevent swarming, it does prevent very much increase—enough to use all my old combs and keep my stock good; and while I do not get nearly as much honey as I believe I should if the bees would give up the foolish habit of swarming, I have reason to believe that I get more than I should by any other system with the same expense. Of course, it will be understood that I am working wholly for comb honey. Where a yard of bees is run for extracted honey, a modification of this view should be used.—Bee-Keepers' Review. Addison Co., Vt.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Several Questions by a Beginner.

1. I transferred a colony during apple-blossoming, from a box-hive to a dovetail. I became over-zealous and fixt up three frames with the old comb which had brood in and replaced in the hive. I find that the comb has sagged and sticks to one or two other frames. Would you cut them apart?

2. Will the bees be likely to swarm after transferring? They have not done so as yet.

3. I hived a swarm in what we call the "Lumber District," at Albany, some time ago. I lookt for the queen but could not find one. I then took the hive with foundation comb, turned the bottom up, swept some of the bees into the hive, then turned it right side up and placed the edge above the remainder of the bees. They immediately began to run up in the hive, and I now have them here in the yard. They seem quite contented, and are working all right. Do you suppose the queen is among them?

4. From this same swarm I notice one drone-bee that goes

in the same as the workers. Does he carry nectar the same? If not, why should he act as he does, and remain away as long as if he were at work? And when he returns he remains in the hive about the same length of time as the workers do.
NEW YORK.

ANSWERS.—1. Yes, I'd cut them apart and straighten the combs in the frames. Don't have any frame that you can't lift out separate from every other frame.

2. They will do just about the same as if they had not been transferred, altho in some cases the transferring would have some effect toward preventing swarming.

3. The great probability is that the queen is in the hive with the bees. In hiving natural swarms, the queen is allowed to run in with the rest, and it is a rare thing that the queen is seen, and also a rare thing that she is lost.

3. A drone never gathers nectar from the flowers. He goes out and exercises to work up an appetite, then goes into the hive and takes a lunch. I don't know why that drone times his trips like a worker.

Shiny Bees—Honey-Dew for Winter.

1. I notice in two of my colonies a good many sleek, shiny-looking bees, usually about eight or ten about the entrance, and on lifting out the frames I find a good many on them. The healthy bees are hard at work all the time endeavoring to force these sleek looking ones out of the hive. They look as if they might have been dipt in oil, and seem to be smaller than other bees. I can detect nothing wrong inside of the hive.

2. Our crop so far has been almost altogether honey-dew, making a very dark honey of a disagreeable flavor. My crop will not exceed 800 pounds from 56 colonies, unless a good fall flow helps us out. The brood-chambers are full of this honey-dew. Will the bees winter well on it? VIRGINIA.

ANSWERS.—1. Occasionally one or more such bees as you describe may be found in different colonies, and no special importance need be attacht to the fact. They have lost their plumage, and that makes them look black, and also smaller. A chicken looks smaller when all its feathers are pluckt. If the number is large in a colony, and if the diseased bees have a tremulous motion, it is probably bee-paralysis. In the North this seldom amounts to much, but it becomes a very serious matter in the South. Very many remedies have been offered, each one saying his own remedy succeeds while the others fail, and that's about equivalent to saying that, as yet, no certain remedy has been found.

2. Some kinds of honey-dew will do well for wintering, but perhaps in most cases it is rather bad, especially if it is very dark.

Crost and Crooked Combs.

I have several colonies of bees in dovetail hives that have badly crost and crooked combs. Would you advise me to prepare new hives, by filling self-spacing frames with full sheets of foundation, and transfer all such colonies into new hives, and then put a queen-excluding zinc sheet on top of the new hive, and set the old hive with its unhatcht brood on top of the new, in order that all the young bees may be hatcht and reared, and not be destroyed?

Or, would it be best to place the old hive at the bottom, after the queen is secured in the new top hive, as then the bees might still hatch the young brood out, and remove all the honey in these crooked combs into the top story? and then, after all the brood is hatcht in the lower story, and no eggs be deposited in it (the queen being at the top) I could remove the old lower story, and melt the crooked combs. VIRGINIA.

ANSWER.—The first question is, whether it may not be possible with a little cutting to get the combs, or at least part of them, separate and straightened in the frames. If the case is so bad that this is not possible, then perhaps you will find very little difference in the two ways you mention. If you put the old combs above, you'll find more honey in them. If you put them below, you'll find more pollen in them. If you don't object to having the honey in the old combs, perhaps it will suit the bees better to have the old combs above.

BEEDOM BOILED DOWN.

Labels on Sections.—Instead of having the very whitest sections, G. K. Hubbard favors using a cheaper grade and pasting labels on top of each section. Looks just as well on opening a case, gives as good satisfaction, and helps advertise.—Gleanings.

An Important Item in Moving Bees, the editor of the American Bee-Keeper says, is to have always a bit of cotton-batting ready to close promptly any leak that may occur. When bees are confined, he says they will take salt water more readily than fresh.

Activity of Italians.—H. Kuhn says, in L'Apiculteur, that he is convinced the Italians are more active than the blacks. In the evening he set the bees at work on some frames with a little honey not far from the apiary. His own bees (blacks) stopt work at sunset, but Italians that came from an apiary more than a quarter of a mile away kept at work till it was completely dark. The same thing was repeated the next day with the same result.

Top Ventilation in Summer.—Dr. Miller, in Gleanings, favors top ventilation in hot weather. It will not do to have an opening close to the sections, as that hinders the sealing of those nearest the openings, but he would at least have an opening to each story whenever a colony occupied with brood more than one story. The editor thinks that top ventilating, like spreading the brood in spring, is one of the fine arts that beginners may do well not to meddle with.

Skylark's Big Yield.—J. M. Hambaugh gives, in Gleanings, a sketch of J. P. Israel (Skylark,) who is now 75 and wide awake; and relates that in 1882, Mr. Israel increast 50 colonies to 101, and the next year decreast them to 16, a bad boy helping the decrease by robbing the bees and starting the bees to robbing. In 1884 he increast the 16 to 69, and harvested 10,592 pounds of comb honey in 2-pound sections—an average of 662 pounds to the colony, spring count!

Value of Unfinisht Sections.—W. Z. Hutchinson esteems them highly at the beginning of the honey harvest. If the harvest comes in a flood the difference is not so noticeable, but when it comes slowly the bees, especially if Italians, are loth to commence in the supers, crowding the brood-nest with honey. He says: "A super of partly-drawn combs at the opening of the harvest has proved nearly as valuable to me as a super of completed sections."—American Bee-Keeper.

When to Unite Weak Colonies.—G. M. Doolittle says he has found it not a good plan to unite weak colonies in spring. The excitement of uniting results in using up more rapidly the old bees, and the united colony gets through no better than either of the weaklings singly. So he lets them alone till some grow to five frames of brood. A frame of brood is taken from one of these and given, not to the weakest, but to one of those having four frames of brood. A week later he takes a frame from each five-brooder and gives to a three-brooder. When all are built up to five brood each, he takes four frames of brood with adhering bees from one colony and alternates it with the frames of another colony, thus making a strong colony with nine frames of brood, that will give a good account of itself in the supers.

How to Find Queens.—G. M. Doolittle gives, in Gleanings, the following specific instructions for finding a prolific queen, based on a theory that it may be interesting for others to confirm or refute:

"To find a prolific queen, look for her between the hours of 9 a.m. and 3 p.m., on one of the two outside combs of the brood-nest; for it is my belief, after 25 years of practical observation, that most queens have a certain route (there are a few exceptions,) which they go over every 24 hours, the queen being near the center of the brood-nest at midnight, when the temperature at the outside of the cluster of bees is coolest, and from there travels in her egg-laying toward the outside of the cluster till noon, when she commences to return, reaching the center again at midnight. The next day she does the same thing again, only going in an opposite direction, or toward the opposite side of the hive, which brings her on one of the two outside combs of brood, between the hours above mentioned.

"Very early in the morning or late at night I rarely find a queen on either of the outside combs of brood, but midway between them and the center of the brood-nest, while at from 11 a.m. to 2 p.m. I find a queen on one of the outside combs of brood, nine times out of ten, providing the brood-nest is in a normal condition. If an empty comb is inserted anywhere in the brood-nest, the queen will be quite likely to be found on this comb 24 hours later; but in such a case the brood-nest would not be in a normal condition."

Consumption During Season of Repose.—M. Leon Dufour says that in his part of France this season lasts eight months—from Sept. 15 to May 15—and may be divided into three periods:

The first period is from Sept. 15 till Oct. 15. During this period there is still activity, brood is present, and altho there are some days when nectar is gathered, the consumption is considerable, varying from three to five pounds.

The second period is of four months, from about the middle of October till the middle of February. During this time there is no brood, no work, and the daily consumption is light, amounting to 11 to 13 pounds for the four months.

The third period includes the end of winter and the beginning of spring, the three months from Feb. 15 till May 15. Activity returns, flowers become increasingly abundant; some days the hives increase in weight; but the weather is very variable, the activity of the bees and the feeding of brood requires abundant nourishment, so on the whole there is heavy consumption, the loss in weight varying according to the colony from 16 to 20 pounds.

At least 33 pounds must be left for winter stores.—L'Apiculteur.

THE WEEKLY BUDGET

THE W. T. FALCONER MFG. CO., of New York State, for three months this season had an unprecedented rush of bee-supply orders. But it seems they were able to give their customers more prompt service than many of their competitors.

DR. A. B. MASON, of Lucas Co., Ohio, Secretary of the United States Bee-Keepers' Union, wrote us July 18:

"I never saw bees so busy on sweet clover, and still they are getting *very* little surplus honey."

MR. W. BOWLING, of Ontario, Canada, wrote us recently:

"The Bee Journal is a first-class bee-paper, that tells one where to get first-class bees and first-class honey; and also is a first-class kicker against adulterators. I wish you every success."

MR. O. O. POPPLETON, now in Brevard Co., Fla., writing us July 18, said:

"We are having another little spurt of honey-gathering, which may increase my average yield from 10 to 20 pounds over former estimate of 80 pounds (on page 441)—a good way to be disappointed; and I have, besides, 25 per cent. increase—a little the best I have done since the big freeze in 1895. Things are partially recovering from the effects of that freeze, but it will be many years before the phenomenal yield of 1894 can be repeated."

MR. W. A. PRYAL, of Alameda Co., Calif., writing us on July 14, reported:

"We did not have any rain to speak of since I wrote you previously. The rains then helpt out some, but not enough to do any great amount of good. Aside from the dry weather the season is a nice one, tho it could be improved in a few particulars. But as man cannot improve the weather any, what is the use of complaining?

"This city has had its wish gratified. We have a camp of soldiers on this side of the bay. They are at Fruitvale, a suburb of the city, four miles to the East. I am four miles to the North, opposite the Golden Gate. So 'soger boys' are a common sight on the streets of Oakland. They are members of some of the California regiments, and we wanted some of the Eastern boys so as to show them some of the nice things hereabouts."

MR. W. L. COGGSHALL, of Tompkins Co., N. Y., writing us July 17, reported:

"A frost July 11th and 12th, when basswood is in full bloom, and no rain since, with North winds and cool nights, has the effect to make bee-keepers blue. We'll have the shortest white honey crop in eight years; so I helpt the men (4 of us and a boy) put up 100 tons of hay in just 15 days."

MR. THOS. G. NEWMAN, of San Francisco, Calif., General Manager of the National Bee-Keepers' Union, writing us July 16, said:

"The high winds here, about nine out of the twelve months of the year, make bee-keeping almost impossible in, around and about San Francisco. It is all that the bees can do to gather enough to live on, altho we have pasturage for them in abundance. Further south and east they often do well, but here, never. The great drouth all over the southern part of the State will make this year's crop of honey very short."

MR. E. B. GLADISH, Secretary of the Leahy Mfg. Co., of Missouri, called on us July 21. He had been on a two weeks' vacation to Niagara Falls and then back again, calling on the A. I. Root Co., of Ohio, after which he crost the State of Michigan, and Lake Michigan, and then visited several manufacturers of bee-supplies in Wisconsin.

It is surprising how some of the bee-supply manufacturers travel around. It almost tempts us to go into that line of business, for we have always had a great desire to travel, but are simply held down in our office all the time trying to get out a bee-paper every week. But "what can't be cured must be endured," we presume, and so we will have to be content to remain at home, and let others do the traveling around.

"H. E. HILL is now editor of the American Bee Journal," is the way the Australian Bee-Bulletin announced it when Mr. Hill took the tripod of the American Bee-*Keeper*. Editor Hill comments on the excusable error as follows:

"The similarity of names is doubtless responsible for the antipodal confusion. But we can stand it if Bro. York can."

Why, certainly, we can stand it. It's the truth generally that hurts. Whatever anyone says of or against us that isn't true always hurts the sayer more than it does us. Of course it is a little unfortunate that the American Bee-Keeper wasn't called by some other name, for, like the rose, if called by a different name it would be "just as sweet."

MR. PAUL VAN SYCKLE, of Porto Rico, has just lately been visiting Editor Hill, of the American Bee-Keeper, who says:

"Mr. Van Syckle was for a number of years located in Cuba, where we made his acquaintance and enjoyed his hospitalities. An apiary at San Juan, Porto Rico, constitutes a part of his present industrial interests, of which he expects to soon be in charge again. He relates a story of home markets, good prices, profusion of nectar-yielding flowers, and general favorable conditions, that makes us fairly 'homesick' for a Porto Rican bee-ranch."

Very likely by the time this number of the Bee Journal reaches its readers, Porto Rico will be under the flag of the United States.

MR. W. S. POUDER, of Marion Co., Ind., wrote us as follows July 18:

"I start for Atlantic City to-morrow morning for 10 days' rest. I never workt so hard in my life as I have this season, and I know you have workt hard, too. I wish you could join me on the trip."

Thank you, Mr. Pouder. Indeed we would like to go with you, but we couldn't possibly get away, for the Bee Journal requires our constant attention. A weekly bee paper, and no helper that can bear the brunt of the work, ties us down pretty closely. Others will have to take the vacations, and we will remain home and report them.

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The A B C of Marketing Honey is a very timely subject that will be discust in a series of articles in the American Bee Journal by Mr. Herman F. Moore, who has had some 12 years' experience and is abundantly able to give something of interest and value to our readers. The first article will appear next week. Look out for it.

◆

A Poor Honey-Year.—Gleanings thinks reports show a more general failure than ever known. Quite generally clover is a failure, but Vermont and Colorado have had a good season, and there are some good reports from West Virginia, Northern Carolina, Wisconsin and Michigan. But no remarkable upward tendency in prices appears as yet.

◆

Honey in Cans vs. Barrels.—We are glad that most dealers in bee-keepers' supplies have stopt quoting barrels and kegs for honey in their annual catalogs. Tin cans holding 60 pounds each are so much more desirable in every way. They can be handled more easily, packt more closely, and then, best of all, when the honey in them is granulated it can be liquefied right in the cans, without first digging it out, as is necessarily the case when in barrels.

If we could have our way, no more extracted honey would be put into barrels. We have now on hand a number of barrels of honey, and would have paid half a cent more a pound for it if it had been put into 60-pound cans instead of the barrels. We doubt if we shall ever buy any more honey in barrels.

Of course, if a large bee-keeper has a certain demand for his honey that would prefer barrels, it would be different. But we believe the cans are much more satisfactory in every way. Can your honey if you possibly can. If you can't can it, then bar'l it up.

◆

Apiculture at Omaha.—On page 385 we presented a good picture of the Apiary Building at the Trans-Mississippi Exposition. This building is located on the North tract directly opposite the Transportation and Agricultural Implement Building. It belongs to what is familiarly known as the Swiss Farmhouse style of architecture, and is declared by experts to be the best arranged and most convenient building ever erected for bee-exhibits. It is built of wood and staff. All the exposed heavy timbers are painted a red brown color, while the roof is green, and has a skylight on each side of the ridge-pole that extends the length of the building. Every precaution has been taken to insure plenty of light, as it is an important adjunct in displaying a honey exhibit. In addition to the skylights there are numerous windows, and the show-cases have both glass sides and tops. The interior of the building has been prettily decorated with draperies of yellow and white, and the names of the counties exhibiting are shown in comb honey.

The Nebraska display is arranged in a case that extends along the south side of the building. The exhibit is very attractive and complete, and contains a large array of samples of honey both in the comb and extracted. A unique feature of the Douglas county exhibit is the bottled vinegar manufactured from honey.

In the center aisle a large collection of prest honey and pollen-producing flowers and plants are displayed in a large case. Nebraska is represented by 1,800 different specimens. There is also an attractive array of wax-flowers, the work of Mrs. E. Whitcomb. Other States exhibiting are: Iowa, Wisconsin, Minnesota, Kansas, Missouri, Ohio, Texas and Utah.

Two liquefying rooms fully equipt with utensils used by bee-keepers are located in the west end of the building for the convenience of exhibitors. There is also a very large assortment of hives and extractors and other articles.

A comfortable reception room has been fitted up for visitors in the gallery where three colonies of bees may be seen at work in glass hives, or passing back and forth from nearby gardens through holes made in the wall for their accommodation.

The United States Bee-Keepers' Union has decided to hold its next convention at Omaha, and an effort is being made to have it held Sept. 7, 8 and 9, which are the dates set for the National Pure Food Congress to be held at Omaha. Mr. E. Whitcomb, Superintendent of the Bureau of Bee-Industries, is in hopes that the convention may be held at that time, as it is believed that reduced railroad rates may be more easily obtained then.

◆

Abbreviating the Names of Journals is the heading of a column and a quarter editorial by Editor Hutchinson in the July Bee-Keepers' Review. Of course it was written as a reply to our utterance on page 425, where we once more protested against the use in print of the letters "A. B. J." when referring to the American Bee Journal. But here is Mr. Hutchinson's editorial:

> In a recent issue of his journal, Editor York objects to the use of A. B. J. as an abbreviation for American Bee Journal. I believe he has before now made the same objection. Out of deference to his feelings I always write it American Bee Journal in my editorials, but I always do it with a feeling that I wish that he didn't feel that way about it. He says that he is the highest authority as to what his journal shall be called; and I suppose that is true, but the next thing is to get people to call it by its whole name. I might request all my friends to call me William Zenas Hutchinson, but I doubt if they would do it. I am almost universally called "W. Z.;" not only by bee-keeping friends, but by my neighbors, and all those with whom I come in contact in a social way. And, say,

"Geo.," I don't feel badly about it. I look upon it as a mark of good fellowship, or comradeship or friendship. It's only to the fellow to whom you feel "chummy" that you ever give a nickname, or cut his name down to an abbreviation. American Bee Journal is a long name. It's almost as bad as William Zenas Hutchinson. Its editor may request us to spell it all out every time we write it, and we may do it because we like him and wish to please him, but when we get to talking one with another, it will slip out "A. B. J." in spite of all we can do. Wherever I go I always hear it referred to as "A. B. J." All orders and correspondence that come to me in reference to the American Bee Journal, call it the "A. B. J." Bro. York, himself, in his letters to me always uses this abbreviation. If we could simply contract it to the one word "Journal," as we can "Bee-Keepers' Review" to simply "Review," or "Gleanings in Bee-Culture" to "Gleanings," it wouldn't be so bad; but to have to write it all out each time—well, it shows that we have some regard for the feelings of its editor, and that is all it does show—in the Review. Of course, if I were writing an article for some paper outside of our special class organs, I should most assuredly refer to it as the American Bee Journal, and do it it with pride, too, but right in our own family, where every one will know exactly which journal is meant, it seems as tho we might be indulged that much. Bro. York, won't you reconsider, and allow us, right here at home, when there isn't company, to use that short, chummy abbreviation that has slipt off our tongues and the points of our pens so many times—A. B. J.?

W. Z. HUTCHINSON.

Had Mr. Huchinson read our remarks on page 425 *more carefully*, he wouldn't have written one-quarter of the above extract, for we plainly said that we objected to the use of the letters "A. B. J.," when meaning the American Bee Journal, *in public print*. What do we care what people call it in their private correspondence or conversation? Why, they can call it "A. B. J.," "B. A. J.," "J. A. B.," or anything else they please, outside of public print, and we won't object at all.

Really, it is the editors of some of the bee-papers that need to learn that giving the initials of a paper from which they copy is no credit at all—neither to themselves nor to the papers they copy from.

"William Zenas Hutchinson" is not a parallel illustration at all, so need not be noticed further than to say that of course no editor would be guilty of copying an article that was written by Mr. Hutchinson, and then sign it "W. Z.," or "W. Z. H.," and call that a proper credit. But we are now talking about publications, and not about "chummy" names.

We said *we* were the highest authority as to how our journal should be referred to *in public print*. To this statement Mr. Hutchinson says: "I *suppose* that is true"—he isn't quite sure of it. If that isn't "cool" we don't know what is. If *we* are *not* the highest authority in this matter we think it is time we are finding out who *is*. Surely, not a man who hasn't a cent invested in the American Bee Journal.

Now, we don't want any editor to print in full the words "American Bee Journal" just because he regards our feelings, nor because he wishes to please us—those reasons are too weak to consider at all. We want him to do it because it is only simple *justice* so to do—because he has no *right* to copy original articles or ideas, and then not give full and intelligent credit for them.

On page 208 of the July Review, second column, after referring to something Mr. Dadant said in this paper about feeding, Mr. Hutchinson has "A. *A*. J., 162." That might mean "American *Ant* Journal," if there were one by that name; but of course he meant the American Bee Journal. Then why not say so, if Mr. Dadant's remark was worth mentioning in the Review?

We stand ready—as we have always stood—to credit other bee-papers for what we take from their columns in just the way their editors wish us to credit them; and we have a right to expect that the editors of the other papers will reciprocate that readiness.

In reply to Mr. Huchinson's final question, we must say firmly, but kindly, *no*—if he refers to public print. And we would say to any and all editors, whether of the apiarian or agricultural press, if you are not willing to give the American Bee Journal proper credit for what you consider worth taking from its columns, then don't take it. We are not begging editors to copy from our columns, but we are perfectly willing they shall take all they want, provided they always give credit therefor as they should—to the American Bee Journal.

The United States Bee-Keepers' Union has a very nice bit of attention given it by way of a full-page engraving in the American Bee-Keeper, showing the nine officers, each one ingeniously set in a honey-comb cell. The likenesses are excellent. Two editorial articles, together with an article on "The Power of Association," by General Manager Secor, set forth the value of the organization and the wisdom of securing membership therein. The editor thus mentions the case of a Pennsylvania bee-keeper for whom trouble is brewing:

> "He has kept bees for 15 years without a thought of any unpleasantness; but, like hundreds of others, his hour has come, and we regret sincerely to state he has no claim upon the Union's protection."

It is a good plan to get under shelter before the storm comes. Besser you jines der Union righd avay qvick!

Asking Questions.—A subscriber in Jamaica wants to know whether he can ask questions to be answered in the Bee Journal. Certainly. Any regular subscriber to this journal has the right, and is invited, to ask questions, which will be answered in print, unless they are such simple questions as can be answered by reading any of the many books devoted to bee-keeping. Of course, no one would begin to keep bees without getting a good book in addition to the American Bee Journal, or some other good bee-paper.

Actually, a year or two ago a subscriber askt if the queen lays her eggs in empty cells, or in those first filled with honey! Think of taking time and space to answer such a question in print!

After referring to your text-book on bees, and you find you are unable to solve any problem relating to your case, then send in your question, and our "special nut-cracker," Dr. C. C. Miller, will do his best to help you out of your difficulties.

The Names and Addresses of all your bee-friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums we are offering. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 20 cents; 100 for 35 cents; or 200 for 60 cents.

Honey as Food is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey among should-be consumers. The forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 20 cents; 50 for 35 cents; 100 for 65 cents; 250 for $1.50; 500 for $2.75. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

FOR THE READERS OF THE AMERICAN BEE JOURNAL.

PROFITABLE BEE-KEEPING,

—WITH—

HINTS TO BEGINNERS.......

By Mr. C. N. White, of England,

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

Mr. White is owner of one of the largest apiaries in the country where he lives, and has made a life study of the subject. He is also lecturer, under the Technical Education Scheme, to several County Councils in England. He will treat the subject in a

Series of Nine Illustrated Articles:

1. General and Introductory.
2. Bees.
3. Handling Bees.
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6. Foundation.
7. Supering.
8. Diseases.
9. Wintering

This is a series of practical articles that bee-keepers of the United States will not want to miss reading. They will appear only in the AMERICAN BEE JOURNAL.

We want our present readers to begin at once to get their neighbor bee-keepers to subscribe for the Bee Journal for the last six months of 1898, and thus read the articles by Mr. White. In order that all may be able to take advantage of this rare opportunity to learn from a successful and practical English authority on bee-keeping, we will send the American Bee Journal for

The balance of 1898 for only 40 cents—
To a NEW Subscriber—thus making it

SIX MONTHS FOR ONLY FORTY CENTS—

Which can be sent in stamps or silver. If you are a subscriber already, show the offer to your bee-keeping neighbors, or get their subscriptions, and we will give YOU, for your trouble, your choice of ONE of the following list, for each NEW 40-cent subscriber you send:

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1 Wood Binder for a Year's Bee Journals
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8 Kendall's Horse-Book
9 Mullen's Horse-Book
10 Foul Brood—by Dr. Howard
11 Silo and Silage—by Prof. Cook
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GENERAL ITEMS

Whooping Up on Basswood.

Bees are booming. I have taken 4,000 pounds to date, and I am in the midst of the basswood flow. I have taken off 2,000 pounds the last 7 days from 100 colonies. J. MESSINGER.
Juneau Co., Wis., July 16.

Too Wet for Honey.

The honey crop so far is short. Like in all other localities, there was a profusion of white clover, but too wet to secrete nectar. We had a copious rain last night which will help the fall crop.
B. FRANK HOOVER.
Whiteside Co., Ill., July 20.

Working on Acorns.

Clover bloomed well but did not yield much honey. I think it was too wet in the spring, and it is too dry at present, but there is still some white clover in bloom in the low places. Bees did not swarm much in this locality—had only six natural swarms from 65 colonies, spring count. They are storing some honey in the surplus departments, but it is dark in color. This dark honey must come from the acorns. Five years ago I got some dark honey that I thought came from flax. But it was awfully dark, and of peculiar flavor. Corn is

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just beginning to bloom, and I think I will get better-looking honey from corn and black-heart weeds, which are very plentiful in this locality, and have not failed to yield nectar in six years. Golden-rod and Spanish-needle are very plentiful here, and always yields some honey. Will some one tell me something about honey from acorns?

I became interested in bees about a year ago, and have been attending to Jacob F. Wirth's bee-ranch. I like to work with bees. I have seven colonies of my own in fine condition.

ANNA MESSIER.
Henry Co., Ill., July 16.

Basswood Good While it Lasted.

Our honey harvest is over for this year, I think. Basswood opened July 2, and closed July 18. It was good while it lasted, and the honey secured will probably pay expenses and leave a margin of profit, especially if we get the better prices that we look for.

HARRY LATHROP.
Green Co., Wis., July 21.

No Swarms and No Honey.

There have been no swarms in this locality, and I have been examining my hives and find them all full of bees and sheets of brood, but no honey.

JOHN CRAIG.
Macoupin Co., Ill., July 18.

Seeded to White Clover.

Mr. Messinger, my neighbor, has taken over five barrels of honey, mostly white clover. Our country has come in freely to white clover this year; one would think the whole had been well seeded by some one. My bees are doing finely. Mr. Messinger never extracts any from the lower story. He wintered about 100 colonies.

GEO. H. LAWRENCE.
Juneau Co., Wis., July 12.

He Keeps in the Lead.

I have mailed a picture of my small apiary, which includes eight colonies, of which I am very proud, and hold the lead of all in my neighborhood for getting the largest quantity of honey, altho all the bees around have the same chance to gather it. All there is to gather from grows wild, and when the white clover is gone we take off the sections and apron them down. I believe I am the only one here who takes the Bee Journal, and that is what helps me to keep in the lead. This is only my second season with bees.

CHAS. S. COCHRAN.
Baltimore Co., Md., July 19.

[Thanks for the picture, Mr. C.—ED.]

Not an Ounce of Surplus.

I began with 50 colonies in the spring, and up to date they have not stored an ounce of surplus honey. Too much rain.

A. B. BATES.
Franklin Co., Mo., July 16.

Failure of Alfalfa to Yield.

I see it stated that alfalfa does not produce any nectar in Iowa. Perhaps the land on which it is grown may have something to do with its failure to give out the nectar. I have in mind two pieces of alfalfa—the one is on first bottom land, and tho a creek runs along one side of the alfalfa and there is good

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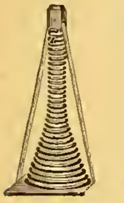

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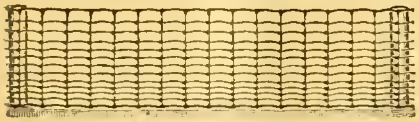

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drainage, it does not give out any nectar. The other lot is on a ridge, the land a stiff clay, and with an incline to the southeast, the elevation about 30 feet above the bottom land, and on the ridge the alfalfa gives plenty of nectar.

WM. H. EAGERTY.

Republic Co., Kan., July 18.

Planting the Apple-Tree.

What plant we in the apple-tree?
Sweets for a hundred flowery springs
To load the May winds' restless wings,
When from the orchard row he pours
Its fragrance through our open doors.
A world of blossoms for the bee,
Flowers for the sick girl's silent room,
For the glad infant sprigs of bloom.
We plant with the apple-tree.

—*Selected.*

QUESTION-BOX

In the multitude of counsellors there is safety.—Prov. 11-14.

Is a Swarm an Organism?—Other Questions.

Query 78.—What makes one colony, if left to itself, build more drone-comb than another? Or, what induces a colony to build drone-comb, and what to build worker-comb?

2. Is a swarm of bees one organism, or is it a crowd of organs—self-sufficient beings?

3. What do you think of the organic conception of the honey-bee?

4. As the larvæ need different food during the time of their growth, how do the nurse-bees make the change, and how do they know to make it at the proper time?—German.

E. France—I don't know.

W. G. Larrabee—These questions are beyond me.

C. H. Dibbern—1. I don't know. 2. I should say a big crowd. 3. To fill a usefull place in nature. 4. I don't know.

P. H. Elwood—I suspect the man who wrote this batch of questions is waiting to answer them, and I am willing that he should.

Jas. A. Stone—1. I knoo't know. 2. I think they are. 3. I don't have any idea on this point. 4. By the instinct God has given them—and in no other way.

Prof. A. J. Cook—1. Condition of hive, with probable character of queen and colony. 2. A multitude of individuals working together. Like a family. 3. ? 4. A great problem. Who can answer?

Dr. C. C. Miller—1. The strength of the colony, the age of the queen, the time of year, etc. 2 and 3. I don't believe we better fool with such things this side the water. Wait till they settle it in Germany. 4. Probably by instinct.

J. A. Green—1. A colony with a failing queen will build more drone-comb than one with a queen that is young and vigorous. Instinct, apparently, teaches them that drones are likely to be needed. 2. This is a question for the splitter of words rather than the bee-keeper. A single bee is an organism, viewed in one light. So is a single human being.

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Viewed from another standpoint, nothing less than the colony can be considered an organism. In much the same sense the family, or in modern life the community, is required for a complete organism. 3. Tell us what you mean. 4. By means of the instinct which God has given them.

O. O. Poppleton—1. Several reasons: An old queen, a heavy flow of honey, a strong colony, etc., and sometimes pure contrariness. 2, 3 and 4. These are fine questions to theorize about.

R. C. Aikin—1. Conditions favoring prospective swarming or supersedure while the combs are being built on urgent need of store comb. Last sentence—need of drones, need of workers. 2, 3 and 4. I leave these to the scientists.

Mrs. L. Harrison—1. Where there are young queens more worker-comb will be built; if an old one, drone, as she contemplates abdicating the throne. 2. Crowd of organs. 3. I don't think. 4. By instinct; instructed by the God of nature.

D. W. Heise—1. Some strains of bees have far stronger inclinations in that direction than others. Much depends upon the rush with which a honey-flow may come, and the prolificness of a queen. 2, 3 and 4. I don't know. Ask Prof. Cook.

Eugene Secor—1. The age of the queen probably has some effect on drone-comb building. Bees also prefer drone-comb for storing honey, hence the outside frames in the brood-chamber are often filled with drone-comb. 2, 3 and 4. Excuse me, please.

G. M. Doolittle—1. An old or failing queen tends toward the building of drone-comb. 2. I incline to think one bee cannot "make a colony." 4. Instinct implanted in them tells the bees just how to accomplish the best results for the colony.

E. S. Lovesy—1. This is governed generally by the strength of the colony and the swarming impulse. 2. As I view it, a crowd of organs. 3. One of Nature's wonderful conceptions. 4. Bees, like other insect life, seem to know when and what to do in the matter of reproduction.

Mrs. J. M. Null—1. Age of queen and size of hive materially affect the building of drone-comb. 2. Of one organism when seized by the swarming impulse (apparently); at all other times each self-sufficient for its mission. 3 and 4. Beyond my reach. "Sour grapes," any way; don't want 'em.

Rev. M. Mahin—Several things have influence in this. The age of the queen has something to do with it. A strong colony will build more drone-comb in a large hive than in a small one. They will also build more drone-comb when forage is abundant. 2, 3 and 4. I cannot undertake to answer these questions here.

Dr. J. P. H. Brown—These questions more particularly concern the ethereal biological, metaphysical and theosophical minded bee-keeper than the real honey-producer. The latter is so held down to old mother earth by the "things of time and sense" that he has no time to give to the "*ethereal*" part of the business.

J. M. Hambaugh—1. The notion of swarming will strike one colony and the

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Illinois.—The annual meeting of Northern Illinois Bee-Keepers' Association, will be held at the Court House, in Freeport, Ill., Tuesday and Wednesday, August 16 and 17, 1898. All interested in bees are invited to attend.

B. KENNEDY, Sec., New Milford, Ill.

instinct of nature prompts them to rear some of the opposite sex, while others are not so smitten. 2. I can't catch on, but it seems to me they are a crowd of organs, dependent upon one another. 3. Here I'm lost. Ask Dr. Miller. 4. That is their trade. Nature provided the instinct.

Emerson T. Abbott—1. What makes one man use tobacco and another let it alone? 2. Perhaps. Are two mud-turtles one? 3. I should like to have the writer explain what he means. 4. How does a pigeon know how to prepare the food for her young, and when to give it to them? How do *you* know anything?

S. T. Pettit—1. Various causes. Old or poor queens; dissatisfaction with their quarters; the thought of swarming. The opposite conditions conduce to the building of worker-comb. A strong colony will build proportionately more drone-comb than a weak one. 2. Yes, one organism. 3. I don't understand the question. 4. I don't know.

Dr. A. B. Mason—1. There are several reasons. A colony with an old queen is more liable to build drone-comb than is one with a young queen, and also more liable to do it under a strong honey-flow than when there is a moderate flow. 2. A crowd of organs. 3. I think it shows the wisdom of the Being who created it. 4. Perhaps Dr. Miller will tell you.

J. E. Pond—1. Who can tell? I can't. 2. A colony of bees consists of three parts, queen, drones, workers, all forming one distinct whole. 3. It would take pages to state an intelligent answer to the question, and then we could only theorize. Certain facts have been proved, why they are so is a guess. 4. Who can answer? I can't. We must fall back upon the idea that Nature governs well.

G. W. Dsmaree—1. "German" has askt a whole book. All close observers know that very old queens induce large numbers of drones—it is a matter of instinct with the bees. A good season and too much drone-comb will usually give a big output of drones. 2. The honey-bee lives in colonies, and that condition with them is essential to existence. Is this true? 4. Don't have to make any change; Nature does that.

R. L. Taylor—1. The better the queen the greater the inclination to build worker-comb; the poorer or the older the queen the greater the inclination to build drone-comb. When a colony realizes that it may soon be necessary to rear a new queen, it is anxious first to provide drones and so build drone-comb. There is a limit to this, when comb is not needed for brood of any kind, but for honey only they are apt to build drone-comb because it is more economical. 2. Both—*E. pluribus unum.* 3. It's marvelous. 4. Instinct, I suppose.

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via Nickel Plate Road, on Aug. 1 and 2, account of Young People's Christian Union of United Presbyterian Church, with return limit of Aug. 31, by depositing tickets with Joint Agent at Saratoga. Cheap rates to many other Eastern points. Communicate with this office, 111 Adams Street, Chicago, for further information. Van Buren Street Passenger Station, Chicago. (53-30-1)

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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, July 20.—Not any of the new crop of comb honey on the market this week; what little has come sold at 11@12c. Extracted brings 5@7c for the white, according to quality; ambers, 5@6c. Southern, fair to good grades, 4@5c. Beeswax, 27c.

Market is in good shape for disposing of honey of all kinds. R. A. BURNETT & CO.

Kansas City, July 9.—New comb, No. 1, white, 11@12c; amber, 10@11c. Extracted, white, 5@5½c; amber, 4@4½c. Beeswax, 22 to 25c.

Old stock of honey all cleaned up. Few shipments of new in market.

C. C. CLEMONS & CO.

New York, July 9.—Comb honey: We closed out all of our old crop some time ago. We have received several lots of new crop from the South, good, No. 1 white, which sells readily at 11c per pound.

Extracted: Receipts of new crop from the South are large. We quote: Common, 48 to 50c a gallon; good, 52 to 55c a gallon; choice, 5 to 5½c pound. Demand is good, especially for the better grades. Beeswax remains firm at 28 to 29c. HILDRETH BROS. & SEGELKEN.

Boston, July 9.—Fancy white in cartons, 13c.; A No. 1 white in glass-front cases, 11 to 12c.; No. 1, 10 to 11c; No. 2, 8 to 9c. Extracted, white, 6 to 7c; light amber, 5 to 6c. Beeswax, pure, in good demand with very light supply, 30c.

At the present time the demand for both comb and extracted honey is very light with but little stock on hand.

BLAKE, SCOTT & LEE.

San Francisco, July 9.—White comb, 8½ to 10c; amber, 6½ to 7½c. Extracted, white, 5½@6c.; light amber, 4¾ to 5¼c. Beeswax, 23@25c

Small quantities of the new crop have been offered by sample, but nothing of consequence has been yet done in the same. There will be very little white sage honey this season, but a moderate amount from the alfalfa and tule districts. Values remain as previously noted.

Detroit, July 21—Fancy white, 11@12c; No. 1, white, 10@11c. Extracted, white, 5@6c; dark, 4@5c. Beeswax, 25@26c.

New honey is arriving, but prices are hardly establisht. M. H. HUNT.

Minneapolis, July 9.—Honey much more encouraging. Fancy white clover comb is selling here now at 10½@11½c. Not advisable to ship darker than amber. Extracted fancy white clover, 5½@6c; amber, 5c; dark, 4@4½c.

Outlook for honey much more encouraging.

S. H. HALL & CO.

Indianapolis, July 18.—Fancy white comb honey, 12@12½c; No 1, 10@11c. Extracted, white, 6@7c. Beeswax, 25@27c.

Only a few arrivals of fancy white comb; market almost bare, and demand good. Quite a little comb honey from honey-dew is being offered, but there is simply no demand for the stuff. WALTER S. POUDER.

Milwaukee, July 14.—Fancy 1-pound sections, 11@12c; A No. 1, 10@11 cents; No 1 8@10c; amber, 7@7½c; dark and old, 6@7c. Extracted, in barrels, kegs or pails, white, 6@6½c; dark and amber, 4@5c. Beeswax, 26@28c.

Since our last the sales of honey have not been large, altho a fair demand has existed and continues, altho the fruit consumption makes some difference with eaters of honey. There is not a very large supply of old stock left, and we shall be in good order for new crop both extracted and comb. The outlook is good, A. V. BISHOP & CO.

Buffalo, July 9.—There is a very good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

St. Louis, July 9.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

WESTCOTT COM. CO.

Cincinnati, July 9.—Demand is slow for all kinds of honey, especially comb. Prices for best white comb honey, 10 to 13 cents. Extracted honey brings 3½ to 6c. according to quality. Beeswax in good demand at 25 to 28c for good to choice yellow.

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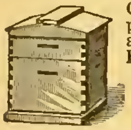

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38th Year. CHICAGO, ILL., AUGUST 4, 1898. No. 31.

CONTRIBUTED ARTICLES

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PROFITABLE BEE-KEEPING,

WITH

HINTS TO BEGINNERS,

BY

C. N. WHITE, OF ENGLAND.

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

No. 5.—HIVES.

There is no royal road to success in bee-keeping any more than there is in any other industry; and as the time and attention given to bee-management must of necessity vary, it is only natural to expect that while some are successful others for want of success will give up bee-keeping in disgust. It is not always, however, the fault of the bee-keeper that success does not attend his efforts. He may have commenced with a style of hive that demands more time and attention to work successfully than he is in a position to give. Now, in endeavoring to give directions for managing the apiary properly there is one blot I must first notice. That the most improved system of bee-keeping should be extended to its fullest limits no one will deny to be an object worthy of every effort; but to the one bee-keeper who can manage the movable-comb system properly, there are, as far as my experience goes, at least ten who cannot, or at any rate do not. It is this latter class for whom I must write.

The fixt-comb principle is objected to simply because the combs cannot be moved about at the wish of the bee-keeper. If, however, a hive is adopted with fixt combs, but in which foundation can be used, that system will not be far behind the movable-comb system in point of honey returns, and it will be simplicity itself as far as management is concerned.

Years ago a hive, certainly in advance of the skep, termed the "Stewarton," and afterwards the "Carr-Stewarton," came much into favor among those bee-keepers who had not the time necessary to devote to bee-keeping on the movable-comb principle. Since the latter hive was introduced little or no effort has been made to bridge the gulf between the skep and the movable-comb systems, until the writer designed the hive now to be described.

This hive is known as the "Ivo" *bar* hive, and in appearance is very similar to the movable-comb or *frame* hive. The brood-chamber is simply four walls of substantial material, the front and back walls being rabetted to receive the ends of the bars, which are ⅜ inch thick and one and nine-twentieths inch wide at the ends, while out of each side a piece ⅛ inch wide and 9 inches long is cut in order that when the ends are close together there will be a space of ¼ inch between the combs. The width of the hive is such as will allow of 9 of these bars being placed close together side by side.

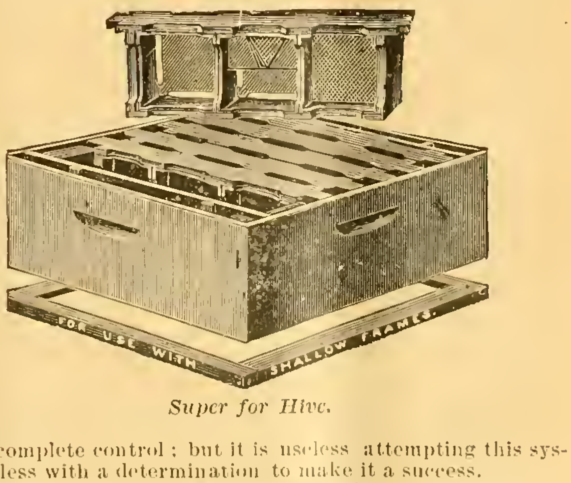
The supers are in all respects except depth like the brood-chamber, for while the latter is 7½ inches deep the supers are only 4⅝ inches in depth. This shallow depth is allowed for two reasons: First, because bees take much more readily to a shallow than to a deep super, and secondly because it may be used with slight alteration as a section-crate. The super is ordinarily fitted with wide bars about 2 inches in width, so that 7 bars occupy the space that accommodates 9 narrow bars.

If a start is to be made with a hive of this description, at least 1½ pounds of brood foundation should be procured. The sheets of foundation are 7¾ inches in depth, and they should be cut so that one piece is 4⅜ and the other 3⅜ in depth. The top corners must next be cut off, also a small triangular piece out of the center of the top. Then open the saw-cut in the center of the bar with a small screw-driver and put in the sheet of foundation. The 4⅜ sheets must be put into the narrow bars for the brood-chamber, and the 3⅜ into the wide bars for the super.

When the bars are thus prepared and placed in position the hive is ready for the swarm. No swarm of less weight than 4 pounds should be expected to do much good the first season; therefore, a 4 or 5 pound swarm should always be secured whenever possible, the extra cost being trifling when the increast amount of surplus over what may be obtained from one of less weight is considered.

MOVABLE-COMB HIVES.

A movable-comb hive is the only shape that a bee-keeper who goes into the work of the apiary thoroughly can tolerate. By using such hives he has the bees and all parts of the hive under complete control; but it is useless attempting this system unless with a determination to make it a success.


FOR USE WITH SHALLOW FRAMES

Super for Hive.

Accuracy in all its parts is essential in this hive if the bees are not to make movable parts immovable. A space of ¼ inch bees respect, but if any larger space is given (for instance between the two chambers when supering, or between the frame ends and the hive sides) it is almost certain that the bees will fill it with comb.

Those who construct their own hives will find the following instructions, if carefully kept to, all that is necessary in making a good tiering hive of the style used most generally in England, and in America where bee-keeping on a large scale is carried on.

The hive consists of floor-board, brood-chamber, supers, lift and roof. The floor-board, with a slanting board in front, must be made to fit the brood-chamber, whose width will be determined by the thickness of the wood. The brood-chamber should be made of ¾-inch wood, the outer walls 8⅞ inches deep, and the inner front and back wall 8½ inches. The inner dimensions are as follows: Side to side 15 inches to take 10 frames, 14½ between the inner front and back walls, and 17 inches between the outer front walls, so that the 17-inch top-bar of the frame may rest on the inner walls and just fit in between the outer walls. When the frames are in the hive they will be level with the tops of the outer walls.

The supers may either contain frames or sections; if the former, they should be exactly like the brood-chamber except being 3 inches shorter, because super frames should be 5½ instead of 8½ inches in depth.

A "lift" is simply four walls with outer dimensions the same as the brood-chamber, and around the bottom to keep it in position are what are termed plinths. These plinths are also placed around the frame supers and around the brood-chamber except in front. The "lift" is for use upon the brood-chamber so that the frames may be better covered with quilts, but as supers are given the "lift" is raised so that it is always at the top. Over the "lift" is placed the roof, which should at all times be waterproof, and have a half or three-quarter inch hole in the middle of front and back for ventilation, and as a means of egress for bees through a cone escape.

FRAMES.

The size of the frame used is a very important matter; and as the sale of colonies may be one means of making the apiary a source of profit, it is absolutely necessary that the frame adopted should be of the British standard size, and therefore interchangeable with any hive in the same apiary, or in any part of the country, built to accommodate standard frames. [Of course in America the Langstroth frame, outside measure 9⅛x17⅝ inches, has practically become the standard.—Editor.] This frame in outward dimensions is 14 inches wide and 8½ inches deep, but the top-bar, which is ⅜-inch thick, projects on each side 1½ inches. The side-walls are ¼ inch, and the bottom-bar ⅛ inch. The width of the frame is ⅞ inch. If frames are made at home (which is not advisable), the outside dimensions and the thickness of the top-bar are imperative. This frame is intended to be used only in the brood-chamber where the production of bees is being carried on.

Shallow supers are at all times to be preferred to deep ones. As they are more readily entered by the bees, they are easier to handle when full, and shallow frames are more convenient than standard frames for extracting.

The shallow frame for extracting-supers is 3 inches shallower than the standard frame, and like it in every other respect.

SECTIONAL SUPERS.

Many people who eat honey prefer it in the comb, therefore it must be produced in a marketable form so as to be packt for transit. Big straw or wooden supers are altogether too bulky and too unsafe for traveling; consequently square or oblong boxes of thin wood have been devised to hold a certain weight of honey These boxes are generally 2 pound and 1-pound sizes, but the latter are now almost universally used. The 1-pound section is imported, in the flat, from America, where suitable wood for its manufacture, soft and while, is grown. The section is grooved so that when bent at the grooves a square of 4¼ inches and 1⅞ wide is obtained. The ends of the section are rabetted so that when folded and tapt at the joint they become fairly rigid.

Before being used in crates or oblong boxes that hold 21, standing in 7 rows of 3 each, end to end, each section must have fitted in the center a piece or a full sheet of foundation. If only a piece called a "starter" is given, it should be fastened by heat or pressure to the middle of the top of the section to afford the bees a guide in building their comb, otherwise they might, and probably would, build it in any but what the bee-keeper considers the right way. The sections put in the crates without starters or foundation cannot be removed from the crate without much trouble and mess, as in liberating the section the comb is broken and the honey made to run.

After the sections have been properly prepared and placed in the crate, a thin piece of wood known as the "separator" is placed between the rows of sections. The bees are thus compelled to keep their work confined to the space afforded by the section, and they usually finish off each side with a nice, even surface, so that they may be packt without fear of damage.

How to get well filled sections and plenty of them will be fully dealt with under the heading of "Supering," and therefore it will be only necessary to say here that every hive should have supering capacity for 75 to 100 pounds of honey. If the hive is being workt for extracted honey, there certainly should be a brood chamber of standard frames, and three shallow-frame supers to form a complete and satisfactory outfit.

A hive workt for sectional honey will require different super arrangements. There should be in addition to the brood-chamber two lifts 9 inches depth, or one of 11 inches and another of 6 inches. The lifts will be taken off the hive when the section crate is about to be placed upon the frames so that any openings around the crate, through which heat from the brood-chamber might escape, may be stopt with pieces of rag. The lift—only one will be required at first—is then placed again in position, the quilts are put upon the crate and packt around in the space between the crate and the sides of the lift so that when once the bees begin to work in the super they may not be driven down by cold nights lowering the temperature in this chamber. Each super crate should have a square of glass fitted in one end; the progress of the work can then be noticed without disturbing the colony. This is of great advantage, inasmuch as additional supers may be given at the right time which may not only be the means of preventing the issue of a swarm, but of the bee-keeper adding very considerably to the surplus from that hive, which would have been lost to him but for the additional room given. Bees invariably build combs from the brood-frames to the bottoms of the sections in the crate simply because there is a space of ½ inch between the top-bars, and an additional ¼ inch beneath the sections, the rule of not giving a space of more than a ¼ inch is thus violated with the result that crates are moved with difficulty, and many sections spoilt. To obviate this nuisance, either an adapting-board must be used as a stand for the crate, or the frames must be made wider so that while the combs will be 1½ inches barely from center to center, the frames will be only ¼ inch apart. All my hives in the future will be fitted with standard-sized frames made 1 1/5 inches wide instead of ⅞. To keep the frames steady and at the correct distance apart, bell-staples will be driven into the shoulder, and a third down alternate ends of the frame.

[Continued next week]

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No. 1.—The A B C of Marketing Honey.

BY HERMAN F. MOORE.

Twelve years ago the writer began at "A" in the above subject, and, while his advancement has been more or less rapid, he has not yet reacht "Z" by a long shot.

It is undoubtedly true that the solution of the question of marketing honey, is for every bee-keeper who can to supply families within easy reach of his home. In this way vast amounts of honey can be kept from the city markets, and from overloading them. This matter of glutting the great centers of business with any produce is now well understood to be the cause of ruinous reduction in price, and not only of the particular lots of honey that happen to be sent to them, but in some degree reduces the price of all the honey in the land when offered for sale. Therefore, it should be strongly urged upon every producer of honey, to sell his product as near home as possible in actual miles.

There will be seen to be several cogent reasons for this, apart from the reason that heads this article. One reason for selling your honey near home is that strangers feel more confidence in you if you can say to them, "My county joins yours," or "Come over any day and I will give you a good time;" or any of the many friendly expressions that rise to the lips when meeting a fellow citizen of the same State, even tho 50 miles may separate your respective homes.

But you say, "I can't sell honey," "I am not built that way," "I haven't the gift of gab," etc. Now, with all respect to your opinion of your inability to sell honey, or to learn to sell honey, let me suggest that the main trouble with 75 per cent. of you is that you want to pronounce vwxyz the first day at school, forgetting that you started a-b, ab not many years ago. Of course, I mean by that you must *learn* to sell honey, and be satisfied with small profits at first, and small day's sales. Rome was not built in a day, neither can any man learn in one year all there is to learn about approaching the great public and finding the way to their pockets.

As we have decided to sell honey to our neighbors and friends within 50 miles of the home apiary, let us not forget to start right. First, decide upon your package for your family trade, for I am proceeding on the supposition that catering to private families means the most in permanent results to the producers of honey.

By all means, adopt a size of package that sells for $1.00, $1.50, or $2.00, and, if possible, have only one size of package, for that will greatly reduce your work and simplify your delivering. If any one desires more than your package, sell them two; and any person short of money, or for any reason wanting less, sell them half of your standard package, and this will be within reach of every one.

Be sure you know the exact net weight in pounds and ounces; also the capacity in pints and quarts, and when askt the weight or size answer freely, with no attempt to conceal or deceive. I want to bear down heavy on this point. Be absolutely open with your customers, for it is the best policy, and leads to the most lasting success—in fact, any other course leads to certain failure.

It seems to be a fact that the majority of men in trade in our great centers of business are not entirely candid with their trade. This causes an earnest seeking on the part of the customers for those whose word can be absolutely relied upon always, in quantity, quality and price; whose goods are *always* "all wool and a yard wide."

I feel sure that one of the greatest causes of the almost wholesale failures in business has been business dishonesty. There is no use trying to dodge the issue—it is *dishonest* to have on your shelves for sale to your customers, "pure black pepper," when you know, in fact were told by the drummer who sold it to you, that "it is half ground cocoanut-shells, so as to make the price more reasonable, and meet competition." In practice you will readily see the application—avoid even the appearance of evil.

There never was a time when dishonesty was more condemned than now, and fair dealing better or more liberally rewarded.

(Continued next week.)

Divider and Wedges in Honey-Production.

BY G. M. DOOLITTLE.

On page 401, I see Mr. Pettit has put a "coat" on that was not intended for him at all, and I am not even going to throw at him the old adage, "If the coat fits let him wear it," for when I wrote what I did on page 321, I did not have Mr. Pettit or his system in mind at all, for there are still scores of people who keep bees, some of whom live within 10 miles of me, who will believe nothing else, except that every bee which comes in from the field deposits her load of nectar directly into the cells, and unless forced in some way to go into the surplus apartment, they will deposit their loads in the brood-chamber. Therefore, Mr. Pettit will see that he failed to use the "charity which covereth a multitude of sins," when he said, regarding a sentence in my former article, "That assertion is based upon nothing at all."

No, Mr. P., that article was not intended for you at all; but since you call my attention to the matter I have something to tell you and the readers of the American Bee Journal, which I will try to make so plain that you will not call it even *theory*.

I took your case right out to the bees to decide. During the winter of 1896 I used my machinery in getting out some wedges according to your description of them, for the large entrance you were recommending at that time struck me very favorably. During 1897 there seemed no need for them, so they were allowed to remain stored away. But this season we have had extreme heat during the past three weeks, so the wedges were brought into effective use, under 25 hives.

Now I wish to say that you are just right in saying that where the bees hung out the day before the wedges were put under, after they were under they did not so hang out, even tho the next day was warmer than the first. But when taking the matter to the bees for settlement, and lying down right in front of the hives thus fixt, so I could ask them all about it, they thankt me for raising their hive up from the bottom-board, for said they, "It is much more pleasant to cluster in the shade than out in the sun, as we had to do before you raised our hive."

Yes, I found about the same amount of bees hanging below the frames that there was clustered out on the hive the day before it was raised; and while thus looking at them and talking with them about Mr. Pettit's system, those from the field kept coming in right over my head. So I watcht to see them pass up at the "sides and rear end of the hive," as all good bees should do when this system is used, but four-fifths of them did nothing of the kind. Just what they did do was to fly and alight right on the cluster hanging below the frames, or drop short of this cluster, when they would run till they reacht it, then climb up and into it, while only the few that happened to come close to the sides of the hive would run along there till they reacht the cluster. In no case did a single bee reach the "rear end" of the hive, for she could not do this except to crowd her way through 16 to 18 inches of clustered bees.

When we think of it, it seems very much more comfortable to the bees with these large entrances, but when we come to the practical part of the matter, it looks much as if we had the trouble and material for the wedges, for our thoughts and visions, with not a pound more honey.

The dividers I believe to be a good thing, that is, unless a few partly-filled sections, for "bait" sections the next year, are really of more value to us than to have all fully completed, as we are inclined to think is for "our best and highest good."

Onondaga Co., N. Y.

The Golden Method of Producing Comb Honey.

BY S. A. DEACON.

It goes without saying that altho an abundance of nectar-secreting flowers and strong colonies are the main requisites for securing a good honey harvest, unless these be supplemented by intelligent manipulation we can hardly expect to get the best results. And as we all know that (even as "trifles make the sum of human bliss") a few apparently very insignificant matters of detail in the management of colonies may favorably affect the "sum tottle" at the cessation of the flow, so we are not justified in lightly or contemptuously ignoring *any* suggestions calculated to work to the desired end which may, from time to time, be presented to our notice through the medium of these, or other bee-papers' columns; and the older and more experienced the propounder of any new suggestion, the more ready we should be to receive it with respect, and, analyzing it, endeavor to ascertain whether there may not perchance be something in it, or whether it be only fit to be past over with the laconic, and perhaps too frequently deserved comment—"only another fad!"

The aforegoing rigmarole about represents the train of reflection that flitted through my cerebrum after reading (page 712, 1897) Mr. Hartzell's article on "Managing Swarms," in which he speaks very approvingly of the Golden method of producing comb honey, as set forth by Mr. Golden on pages 481 and 883 of 1896. I had read these articles cursorily at the time they appeared, but deeming the plan rather complex and fussy—incommensurately so with the probable extra gain—I past them out of mind; but Mr. Hartzell's commendatory statements thereanent have caused me to go carefully over them again, with the result that, I cannot for the life of me see wherein Mr. Golden adduces the least proof of his system of management having any particular pull over the method or methods hitherto commonly adopted of returning swarms. Either Mr. Golden's style is not sufficiently explicit, or the obtuseness of my intellect makes me inaccessible to the obvious; and so, like the woman mentioned by Dr. Brown, who preferred the old-time process of getting babies to any new-fangled plan, Mr. Golden will need to adduce far more perspicuous proof of the superiority of his method ere I, with my limited intelligence, can see my way to admitting a preference for it over the old style of doing things.

Neither he nor Mr. Hartzell, as far as I can see, make any comparison between swarms treated on the Golden plan and by any of the older or ordinary methods; they only contrast the results of the swarmed colonies treated by Mr. Golden's method with such as did *not* swarm. All they have seemingly attempted to prove, and of which every bee-keeper is well aware, is, that a swarmed colony, intelligently managed, can be made to produce more honey than a colony which has *not* swarmed; but nothing which either of these gentlemen have stated tends to prove that Mr. Golden's method of manipulation is superior to that generally in use under the same condition of things. Perhaps a further article from Mr. Golden's, or from Mr. Hartzell's, pen on this decidedly interesting matter may help to dispel the fog, and "make me sensible," as Paddy says, and enable me to see that there's more in it than I have so far been able to discover.

The way the matter presents itself to my sensorium is as follows: Mr. Golden claims that by hiving a swarm on his system, viz.: in a super of sections placed under the brood-chamber, he gets these sections rapidly filled with honey, and which would, he asserts, under the old order of management, "have gone into the brood-combs." Surely not, if tho swarm were hived on starters, and the supers put where their name plainly indicates they *should* be put—a-top, he would then have had the same results, or I am greatly mistaken.

I have never tried Mr. Golden's plan, for the reason that I feel thoroughly convinced that were I to do so the result *with me* would be about as much pollen in the sections as honey. How Mr. Golden manages to keep pollen out of his sections is "a huckleberry quite beyond my persimmon;" I am sure *I* could not do it, nor will I attempt to guess how *he* does it. I am sorry he is so reserved on this rather important point.

Mr. Golden's plan, we are seemingly told, can only be adopted provided a colony swarms. But why not treat *every* colony in the same way, swarm or no swarm? All one would suppose to be necessary would be to cage the queen among the sections, as directed, and put the super underneath the brood body. But the pollen, Mr. Golden—pray what about the pollen? Will the bees go upstairs with that while leaving the honey down below?

Mr. Golden's statement that colonies manipulated by his method averaged 119 pounds as against 53 pounds obtained from those which *did not swarm*, furnishes no proof, that I can see, of the superiority of his system of returning and treating swarms over those long in vogue. I, for one, would esteem it a favor if Mr. Golden would kindly furnish us with comparisons between returned swarms managed by his method and a like number treated in the old way, setting forth clearly and seriatim each and every detail and operation, and not omitting to state how he overcomes the difficulty of the pollen; and if he succeeds in convincing me of the superiority of his plan I shall not hesitate to adopt it (if ever a honey-flow *should* by chance come my way—a thing I have not seen for the past four years!) and that with a feeling of gratitude towards its originator.

At the same time let me tell Mr. Golden right here that tho I may be induced upon clearer proof of its superiority than has been so far advanced to adopt his swarm-returning plan, I'll see him hang—I mean bothered, before I'll have any truck with that fussy old feeding arrangement of his; for I consider that my simple "Rapid Drawer Feeder" beats his all to fits—knocks it clean into a cockt hat! I hope he will try it and be convinced.

But as I am getting into "the sere and yellow"—verging on three score—and Mr. Golden's "picter" doesn't show that he can give me any points in this respect, I think it is time we old boys gave our inventive faculties a rest, and let the youngsters run the "Advance" department of the Show; and who, I am afraid, will only be poking fun at us old fogies, and at what they will conceitedly call our "funny fads;" and, what with my chest of drawers in the basement, Mr. Golden's topsy-turvy ideas, so alarmingly subversive of the old order of things, they will be setting us down as getting doty. Well, it's a perplexing, bewildering, intellect-confusing pursuit, calculated to drive any one embarking in it crazy, and I am seriously thinking of leaving the bees to their own rude, primitive and senseless devices, and let 'em see how they get on, relinquishing all further attempts to reform them, and going on with that nap where Mr. Bevins' left off!

South Africa.

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The Power of Association or Combination.

BY HON. EUGENE SECOR.

It ought not to be necessary, at this late date in the nineteenth century, to offer an extended argument to prove the power and value of organized effort.

There was a time in the history of mankind when the individual seemed to be a more potent factor in society and business than at present. There was a time when every man builded his own home and defended it by his own right arm. There was a time when every successful enterprise was projected and carried to completion by personal enterprise, personal valor, or personal wealth.

Even after tribal relations had been establisht and tribal protection guaranteed, success depended almost entirely on individual exertion. Cities were built, large mechanical transactions attempted, and cattle ranches establisht all without syndicates.

But the world is a little older than it was. Society has changed in some respects. Almost everything is done differently from what it used to be. Now, instead of every man being his own banker, and carrying his money in the sack when he goes down to Egypt to buy corn, he writes his check on New York or London. Business methods have so improved that a dollar goes farther in transacting the world's business than it did in the old time. This has been brought about through organization and combination. A great many individual dollars brought together through associated effort may be made to produce effects which never could have been brought about by the same individuals acting each for himself and independently.

Organization has become the great fact of the age. No railroads are built by individual capital. No steamship lines are owned and controlled by one man. Great commercial enterprises are launcht and sustained by combined capital and organized effort. Corporations have taken the place of the once single-handed manufacturer until it is hardly possible for one man, without capital, to compete with corporate wealth.

Since the business of the world is largely done by great corporations, the trade guilds have been a natural outgrowth, because the only way to meet organization is by counter organization. Men lay their heads together, form alliances for mutual protection, and thereby gain strength impossible to the single worker.

Men interested in a common purpose are enabled to unite on a common plan of action, and work to some effect. For instance, it is too large a job for one bee-keeper to attempt to fight adulteration of honey, but if he can combine his efforts with that of ten thousand other bee-keepers, all acting in unison, and that organization acting with other associations interested in the subject of pure food, together they may accomplish something.

As government in this country is constituted, the powers that be are ready to listen to any one who represents a considerable body of voters, if the said voters "mean business."

When a politician is askt to support a measure, he wants to know how many of his constituents are anxious about it.

All other trades and professions are organized for mutual help and protection. Bee-keepers should have one organization so strong in numbers and influence that their rights shall be respected. The object of the United States Bee-Keepers' Union is to fill this long-felt want. Its purpose is two-fold—to promote legislation helpful to bee-keepers, and to act as the guardian of their legal rights.—American Bee-Keeper.

Winnebago Co., Iowa.

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Suggestions on Apiarian Exhibits at State Fairs.

BY W. Z. HUTCHINSON.

For at least a dozen years I have been making exhibitions of bees and honey at my own State Fairs, and this year (1897) I exhibited bees and honey at five State Fairs. It is from this experience that I wish to criticise some of the premium lists and to make some suggestions.

Perhaps I cannot begin better than by giving such a premium list as I would approve, and then proceeding to compare it with the lists of some of the State Fairs, and show *why* I would make the changes suggested:

	1st.	2nd.
Single-comb nucleus Italian bees	$10	$5
Single-comb nucleus black bees	10	5
Single-comb nucleus Carniolan bees	10	5
Sweepstakes on bees, greatest number of different races of bees, in single-comb nuclei	10	5
Comb honey, most attractive display of 250 pounds, no more and no less	25	15
Sample case of comb honey, not less than 10 pounds, quality and manner of putting up for market considered	5	3
Extracted honey, most attractive display of 250 pounds, no more and no less	20	10
Specimen of extracted honey, not less than 10 pounds, quality and manner of putting up for market considered	5	3
Beeswax, most attractive display of 10 pounds, no more and no less, bright yellow wax to have preference	10	5
Largest and most attractive display of honey-producing plants, prest and mounted	15	8
Largest and best display of apiarian implements	15	8
Sweepstakes, the largest, best, most interesting and instructive exhibit, all things considered	25	10

The foregoing foots up $242, and it could be adopted by any Fair association by simply changing the amounts of the premiums, keeping the proportions between the sums the same.

I will now proceed with my criticisms, keeping in mind the fact that the object of a Fair is to encourage, stimulate and educate.

Turning to the premium list of the New York State Fair, I find that premiums are offered on the same kinds of bees as are mentioned in the foregoing list, but, while it says "in observatory hives," it does not specify that they shall be "single-comb hives," and the premiums are not liberal.

When I first began exhibiting bees they were always shown as full colonies, and "numerical strength" was made one of the competing points. A populous colony bears confinement very poorly—practically it is ruined by the confinement of a week or ten days. The bees are quite likely to smother, and the combs to melt down from the heat. Beside this, a full colony does not really show so much as can be seen in a single-comb nucleus. The brood and queen are always in the center of the colony where they are out of sight. How often at Fairs we hear the expression, "I would like to see a queen-bee! I have never seen one, and I would be obliged if you would point her out to me." With a single comb this can always be done, as the queen can be found upon one side or the other. The few bees bear confinement very well, especially if they are young bees and given abundant room. There is nothing about an apiarian exhibit that attracts attention quicker than bees under glass. People will exclaim, "Oh, see the bees!"—and then rush up, and then rush off after others to bring *them* up. Bees always draw a crowd, and this allows the exhibitor to explain to an interested audience the wonders of bee-keeping, and the healthfulness and value of honey as a food.

Taking bees to a Fair is risky, laborious and expensive; they are something that requires much care in handling and in looking after, and for this reason the premiums ought to be liberal. I do not approve of offering premiums upon all of the different varieties of bees, as there are some varieties that are of no great value in this country, and in regard to which there are many different opinions. The three varieties mentioned might be called the standard varieties, and are recognized as such. If exhibitors have other varieties and wish to exhibit them, the "sweepstakes" offer will cover such displays.

In one respect the New York premium list is ahead of any list I have seen. In both comb and extracted honey, it specifies the *quantity* of honey that shall be shown. I have only one criticism to make. It says "*best* display." I would say "the *most attractive* display." Perhaps this is hypercritical, but there cannot be too much attention given to the wording of the list—have it so worded that it is *impossible* to be misunderstood.

The matter of quantity ought to be explicitly mentioned. The Indiana list simply says, "Comb honey, quality and manner of putting up for market to be considered." Not one word about the quantity. Had it said the "most attractive display" that would have been better, as quantity might have been considered *one* factor in attractiveness. As it was, one exhibitor went to the trouble to build up a pyramid of honey that reacht to the roof, assuming that, if the honey was all equally good so far as "quality and manner of putting up for market was considered," the largest quantity would carry off the palm. The judge decided solely upon "quality and manner of putting up for market," in both comb and extracted honey, quantity cutting no figure whatever.

Hitherto, most of the premium lists have offered premiums for "the best display" of comb honey. Lately some of them have changed it to read the "most attractive." These offers are pretty good, but the objection is that the first prize usually goes to the largest display. Of course, size is *one* attraction, but it is not the only one by any means. As it is, most of the exhibitors bring in their honey in the regular shipping-cases and stack it up, and the largest pile gets the first premium. There is not much encouragement to make the exhibit attractive in other ways, such as by arrangement or ornamentation. This is why I recommend most heartily the New York premium list in this respect. It limits the quantity to 250 pounds, it must be that much, no more and no less. Now then, the exhibitor who can put up that amount of honey in the most attractive shape will win the prize.

There is a premium offered on tasteful arrangement and skillful display rather than upon quantity; 250 pounds of honey is really enough, if properly displayed; when we have seen that much, it is no great sight to see twice as much. Comb honey is fragile stuff, and the carting around of large quantities of it, and paying freight upon it, when better ends can be gained by working on different lines, is unwise. As there is a greater risk and expense in shipping and exhibiting comb honey than is the case with extracted, the premiums should be greater on the comb honey. Aside from the premium on the most attractive display, there ought to be a premium on a small quantity, so small that it can be furnisht by *any* bee-keeper, and the offer should be for the best honey, that is, for "quality and manner of putting up for market."

Referring again to the matter of bees, I see that some of the Fair associations still offer premiums upon queen-bees caged. There is no place in which a queen can be shown to so good an advantage as in a single-comb nucleus, and the only judgment that can be pronounced upon a queen is that made by looking at her workers. I have reference to purity of race, and that is the only point that can be decided at a Fair. Queens kept in cages in the cool weather that frequently comes during the fall are often chilled and die.

At the Illinois State Fair last year there was a premium offered on caged queens, and one of the competing points was that of quantity. The nights were cool, and one exhibitor lost nearly 20 queens (worth twice the premium offered). Another had 28 queens on exhibition. He took great pains to keep them as warm as he could nights, but many of them were worthless at the end of the Fair. The first premium was only $10, and the exhibitor who won it had on exhibition 35 queens, and lost probably half of them after the Fair was over. Queen-bees ought to have no place on a premium list. The place for them to be shown is in the single-comb nuclei, where they can be kept warm and cared for.

There is one other premium that ought never be offered, and that is for the greatest number of samples of different kinds of honey. This offer would be all right if all men were honest, but, unfortunately, they are not, and the "manufacture" of different samples by mixing is so easy and so difficult of detection that many cannot withstand the temptation. There ought to be *nothing* for which the judge must take the exhibitor's word. Some lists contain such provisos as the following: "Honey must be of the present year's crop," "Must be the product of the exhibitor," etc. Such things are foolish, as there is no way of proving that they are lived up to.

While I am discussing the things that ought to be left out of a list, I may mention the offering of a premium on "honey extracted on the grounds;" also "comb foundation made on the grounds." These offers came about in this way: The managers of Fairs have about discontinued the offer of premiums on all kinds of implements and machines. When bee-keepers could no longer get a premium on a honey-extractor, they induced the managers to offer one on "honey extracted on the grounds," thus bringing in the honey-extractor. But this is no premium on the extractor, as the honey shows no characteristic of the machine that is used. It has been urged that the use of the machine on the grounds educates the public. As a rule, not two dozen people will see this operation—often it is done toward night, when the crowd is off out of the way. It is a mussy, disagreeable task when attempted away from the accessories of the honey-house.

The same objections apply to the manufacture of comb foundation on the grounds, with the exception that in this case the foundation *might* show the superiority of the machine in a slight degree, but it might also be a greater indication of the skill of the operator. I don't wonder that the managers have discontinued the offering of premiums on implements and machinery—that is, in the way of pitting one implement against another, as each implement is usually exhibited by the manufacturer or his agent, and the awarding of the premiums is very difficult, and the awards unsatisfactory. But there are premiums offered at many Fairs for the best display of furniture, clothing, musical merchandise, stoves, etc., and in this sense there might be a premium offered for the best display of apiarian implements that would bring no unpleasantness. The display of implements is of interest to bee-keepers, and aids them in giving information to the general public.

The display of honey-producing plants makes one of the most handsome backgrounds that can be used in connection with an apiarian exhibition, and interests and instructs the public.

A general sweepstake premium for the largest and best exhibition is a powerful incentive to the making of a large and attractive exhibition, and ought not to be omitted. Diplomas are "no good."

In all of the other departments of the different premium lists there is something approaching uniformity—that is, the horse department of the Michigan premium list does not differ materially from that department in the premium lists of other Fairs, and there is no reason why the same uniformity might not exist in the apiarian department of the different lists. I shall send a copy of this paper to the secretaries of the different Fairs, and to the premium-list committees when I can learn of them; also to those bee-keepers in each State who are interested and attend their State conventions. There is probably not a State Fair association that would not adopt the premium list recommended by their State association of bee-keepers. The managers have no interest in the matter except to please the bee-keepers; that is, if there is a given sum that can be used in the bee-keepers' department, the managers are perfectly willing that the bee-keepers shall make up their own list.—Country Gentleman.

Genesee Co., Mich.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Using Two-Story Brood-Chambers.

You advise for comb honey two-story 8-frame dovetailed hives, or 16 frames, until the time to put on supers, then one story is to be taken off, reducing them to one story or eight frames. My experience is that in this locality the honey harvest opens and supers are to be put on somewhere near May 15; and up to that time the queen never occupies or fills more than eight frames with brood. In that case I should think it would not be necessary or practicable to put on the second story. Am I correct, or not? INDIANA.

ANSWER.—I don't know. If a single story gives all the room the queen will occupy, and if no more room is needed, then there can hardly be any advantage in giving a second story. But you can hardly be very sure about this if you've never tried it. Are you sure none of your queens will occupy more than eight frames if they have a chance? I think you'll find it true that, as a rule, bees don't like to use either of the two outside combs for brood, using them only for honey and pollen. If you find brood in either of the outside combs (and you may find it in both) you may feel pretty sure that they are somewhat crowded for brood-room; and if you find eight combs occupied with brood in an 8-frame hive, the probability is that more than eight combs would be used if the bees had two stories. Keep a strong colony in one story of eight frames and it will have brood in not more than eight frames, if indeed it has more than six, whereas the same colony in two stories may have 9 to 14 frames with brood. Some colonies don't need the second story; some do. If you practice using two stories, you'll find a good many more of your colonies needing them than if you kept all of them constantly confined to one story. That is, by giving always all the room needed, you'll have stronger colonies.

A Quintet of Questions.

1. Do the bees store as much honey in the sections where only 21 are put on a hive as where there are 32?

2. Dr. Gallup told in this Journal of a man who made 108 colonies of bees out of one in two seasons. How did he get enough queens? and how did he get the colonies strong enough for winter?

3. How long should a good queen-cell be? Are natural queen-cells better than others?

4. Can you give me the address of a few bee-keepers that use the Quinby closed-end-frame hive, as shown in Benton's book on bee-keeping? Are they better for wintering than the loose-frame hives?

5. Do Doolittle and Gallup answer questions in the American Bee Journal? WISCONSIN.

ANSWERS.—1. That depends somewhat upon how the matter is managed. If you put on one super at a time, and wait till all the sections are sealed before giving a second super, you'll probably get quite a little more honey by using the larger supers. If you use better management, and give room as fast as needed, never allowing the bees to be crowded for super room, you'll probably find no difference.

2. I don't know the particulars of the case, but he could follow the nucleus plan, rearing a queen in the nucleus, and then building up the nucleus. With a sufficiently long and good honey season, there would be no trouble in having the colonies stored for winter, the latest formed receiving aid from the earlier ones. Feeding might also be resorted to.

3. Perhaps something like 1¼ or 1½ inches. But there are so many exceptions to the rule that it makes the rule of little account. Sometimes a cell two inches long will be a very poor affair, and sometimes a good queen will come out of a cell that hardly shows above the surface of the comb. So far as you can judge from appearances, the length of a cell is hardly so important as its appearance otherwise. A cell that is deeply pitted is more likely to be good than one that is smooth. That is true in the case of cells reared for natural swarming. If you take away the queen, and a cell is reared right in the middle of a comb with brood in every cell about it, the cell may be perfectly smooth and of so little prominence as not to be noticed at a careless glance, and yet it may produce an excellent queen.

The average natural queen-cell is better than the average cell reared when the bees had no previous thought of swarming or superseding. For in making up the average, you must take into account a lot of very poor cells reared in weak and dispirited nuclei. Rightly managed, however, and reared in a strong colony—at least left in a strong colony till sealed—a cell reared artificially may be as good as the very best.

4. I'm not entirely sure of the address of a single bee-keeper who uses that frame, for altho many Quinby frames are used, I don't know which are closed-end. If any of the fraternity who use this particular kind of frame care to answer any questions that may be askt about them, perhaps they will make it known. As a rule, there is no other class of men more willing to divide their knowledge. Closed-end frames ought to be warmer for winter than others.

5. All the answers that appear in this particular department are written by the same person. When a question comes in, it goes into the general hopper, and is answered in this department. But both of the gentlemen named have answered many questions in this paper, and probably would do so at any time if so requested.

Honey in Mason Jars—Smothered Colony.

1. I have some extracted honey in Mason fruit jars. Would you advise one to put the covers on tight, the same as when canning fruit? About ⅛ of it was unsealed when extracted. It is not for sale, but for my own use.

2. I was obliged to move a colony that was queenless, but had some sealed queen-cells. In the morning I stopt the entrance with wire-cloth before moving it, and at night on removing the cloth I found most of the bees smothered, and the two outside combs (heavy with honey) a little broken down, and some melted. The bees had turned almost black, and most of the brood was dead. What would you do with the combs having the dead brood?

For information, I would say that I found enough live bees to form a nucleus, and to sting (in fact, the sharpest and worst-feeling sting I ever received). I gave them some eggs from another colony in case the queen-cells did not hatch out, all in the same hive, and smoked them in after cleaning it out. I also extracted the two broken combs and have the honey in a jar by itself to find out how it acts. OREGON.

ANSWERS.—1. If you heat the honey as in putting up fruit, then seal it up tight, it is said to keep well and not granulate. But it's rather a dangerous thing to heat honey, for if you run it above 160° you are likely to darken it and hurt the flavor. If you leave the covers loose or entirely off, so as to give chance for evaporation, and then keep it in an airy place, a place where salt will keep dry, you will find it will keep well, altho it may granulate.

2. I would give the combs of dead brood to other colonies to clean up and take care of. It's only fair to say that some good authorities say there is danger of foul brood from rotting brood. I agree with those who think that if there is no foul brood present in any other hive you can't start foul brood without the seeds of foul brood, but knowing the two views you can act on your own judgment. If you are afraid the decayed brood will start foul brood, by all means burn it up. But if it was in my own apiary, I would give it to a strong colony, or to more than one colony.

You will very likely find that the honey extracted is not different from other honey.

Bee-Range, Shading Hives, Etc.

Being a new subscriber, I am not aware that the question of bee-range has been discust before. Now that nectar is none too plentiful, the question of how far bees will range in search of food, might be taken up with profit. Also, the most improved manner of shading hives, which may be termed a burning question. ILLINOIS.

ANSWER.—At different times the question has been askt, "If I can have only one, shall I get a bee-paper or a bee-book?" I'm not sure but I have said a paper first, or at least have put them on equal footing. I wouldn't answer that way now. I'm older, and know more. By all means get the bee-book first. There are certain points that every bee-keeper—every beginner in bee-keeping—will need to know, and that he will be likely to want to ask about. These points are pretty well known to every experienced bee-keeper, and the text-books take them up and answer them, in most cases more fully than they can be answered in a department like this. It is much better for the beginner to have all these questions answered in bulk in a book, available at any time, and more easily referred to than if scattered in the pages of a bee-paper, and after you've well mastered the contents of any or all of the best text-books, you will still find plenty of things to ask about.

The matter of the distance bees will go for stores has been very thoroughly discust, and it would be space wasted to have much room taken up with its discussion; but that you may not have to wait till you get your bee-book, I'll say that there are some differences of opinion as to the distance bees will go to gather stores. Some think that bees will go from choice three miles or more. Some think they do not often go more than 1½ or two miles. There are cases on record in which bees have been known to go *seven* miles under favorable circumstances. So you see there is some chance for difference of opinion, and while the matter has been fully discust in the past, it is quite possible you may get some new light, and any facts that may come to your knowledge as helping to settle the question will be gladly welcomed. If you consult the actual practice of those who have out-apiaries, you will probably find that they are pretty well content to have their apiaries three or four miles apart, in which case they seem to think that bees do not work generally much more than two or three miles from their hives.

Looking at a text-book, I find that the question of shade and ventilation (it's hardly a "burning question," rather a cooling one), occupies as much as perhaps two pages like this. I may say in a nutshell that if you have trees for shade, you have the very best kind. If you have no trees, and must have shade without time to grow anything, one of the ways is to have any kind of a covering of boards with a space between the covering and the cover of the hive, and a big stone or something else by way of anchorage. An easy way, if tall grass is easily obtainable, is to put on top of a hive an armful of green-cut slough grass or other tall-growing grass, and lay upon it two or three sticks of fire-wood. It dries to its place nicely, and will last throughout the season.

Use of Acid in Rendering Wax.

1. What kind of acid is sometimes used in rendering wax, and what is the process?

2. Is wax rendered with acid just as good for foundation-making?

3. Can acid be used to any advantage on residue from rendering old combs in a sun extractor?

4. Can any more wax be obtained from such combs by the use of acid? ARKANSAS.

ANSWERS.—1. Sulphuric acid is the kind used. I have no practical knowledge of the process, having never used acid in that way, but I believe the plan is to mix the acid with the wax while hot.

2. There seems to be a difference of opinion. Probably the wax does not have quite so much of its peculiar, agreeable odor after being subjected to the acid.

3. Yes, it is on that sort that it is used to the best advantage.

4. Yes, if I am not mistaken, you can get wax from remains that otherwise would be thrown away.

Keeping Down Increase.

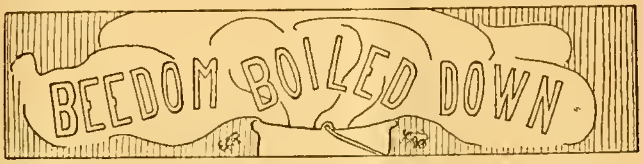
If I do not desire any more increase of my apiary, and my bees are swarming, is it not a good way to prevent increase of colonies by returning the swarm to the old hive, provided I take all frames with sealed brood out of it, and divide this among weak colonies in the apiary, and give the new swarm empty combs or frames with full foundation? My idea is that I could leave the old queen with it, or if I do not want her, kill her, and leave one old comb with one or two sealed queen-cells in it. Of course, when I give the old combs with sealed brood to other colonies, I brush off all the bees to the old stand. What do you think about it? LOUISIANA.

ANSWER.—Your plan will work all right. Leave the old queen with the colony, and you have the same as any natural swarm, with the added advantage that it is considerably stronger than when managed the usual way. You will hardly be so well satisfied with leaving them a comb with queen-cells. If you leave more than one cell they may trouble you with swarming. If you leave only one, that one may not be the very best one, and there is more possibility of its entire failure than where the bees have several to choose from. Moreover, if there is only a queen-cell left, it will be, perhaps, two or three weeks longer before young workers will be emerging, than if you had left the old queen. Your colony will be badly depleted before recruits come on the field of action.

Uniting Colonies.

How would you unite two colonies without their fighting? I tried it and did not succeed very well, as they did a great deal of fighting. PENNSYLVANIA.

ANSWER.—There isn't room in this department to give all that should be known and is given in the text-books. In general, it may be said that much depends upon the condition of the bees, pasturage, etc. If one of the colonies to be united has its queen removed a day or more before uniting, there will be less trouble. Bees unite more peaceably at a time when pasturage is plentiful. If you shake all the bees off the combs, letting them run into an empty hive thoroughly mixt up, and afterward give them their combs, there will be little trouble. If you alternate the frames, putting into an empty hive a comb from one of the hives with its adhering bees, then a comb with its bees from the other hive, thus alternating throughout, there will generally be no trouble. If the colonies are so small that one of them can be put in one side of a hive and the other in the other side, with an empty comb between, they will generally unite peaceably.



Bees and Horticulture.—G. Kimbrell planted musk-melons close to his bees, and also ¾ mile distant, surrounded by timber, where no bee was ever seen to visit them. They grew alike, bloomed alike, but the vines near the bees set four melons to every one on the other vines.—Busy Bee.

* * *

Removing Honey from Hives.—Don't use much smoke in this process, as honey often has a slight, smoky tinge from injudicious smoking, says C. P. Dadant, in Busy Bee. An escape is a good thing, either for comb or extracted honey, but if the weather is very hot the combs may break down for lack of free ventilation if an escape is used.

* * *

Space Between Two Surfaces of Sealed Honey is a matter of dispute between J. E. Crane and the editor of Gleanings. The latter says he measured a number of lots coming from different parts of the country, and nine out of ten of the spaces would measure ¼-inch. Some went 1/64 under, some 1/16 over. Mr. Crane found the spaces varying from 3/16 to ¼, the average being somewhere from 20/96 to 21/96. Mr. Root thinks it may be that blacks make closer spacing, as Mr. Crane's honey was from blacks.

* * *

Specific Gravity of Different Honeys.—R. Wilkin had a glass tumbler ¼ full of white honey. He filled it with dark amber sun-extracted honey. In a few hours the white honey was on top. Then he filled the tumbler ¾ full of white honey, and put two tablespoonfuls of dark on top. The next morning the dark was in a distinct stratum at the bottom. He suggests having 12 pounds of honey specially colored, then a small quantity, by staying on top or sinking to the bottom, would show whether a lot of honey was above or below the 12-pound mark.—Gleanings.

* * *

Some Bee-Lore.—Editor Abbott quotes a paragraph from the Youth's Instructor, but some remarks he makes rather imply that he does not fully endorse it. The paragraph is as follows:

"After a time the grubs shut in the big cells turn into queen-bees, and they begin to sing a song. The queen-bee hears it, and she knows that more queen-bees will come out. That makes her angry. She runs at the cells to try to kill the new queens. The workers prevent her. But there can be only one queen in a hive at a time. So the old queen says, 'Come! I will go away!' Many of the old bees say, 'We will go with our queen.' Then with her they seek a new home."

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

EXECUTIVE COMMITTEE—Pres., George W. York; Vice-Pres., W. Z. Hutchinson; Secretary, Dr. A. B. Mason, Station B, Toledo, Ohio.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Langstroth Monument Fund is again brought up in Gleanings for July 15. It seems very strange that all the bee-keepers in America are unable to get together even $200 for the purchase of a monument for Father Langstroth. Only about $100 is now in sight for the purpose. We were hoping that by next fall the monument might be bought and erected.

Mr. P. H. Elwood, one of New York's greatest bee-keepers, says that he has just been buying a family monument for $100, and thinks it good enough. Editor E. R. Root says that his idea is about a $200 one for Langstroth. Well, suppose we all call it $200, then, and go to work now in good earnest and raise the balance of about $100 during the month of August. It can be done in one month just as well as in two years if bee-keepers will only think so.

Why not have four or five hundred 25 or 50 cent subscriptions right away? Send them in to us, if you prefer, and we will publish the list of names of contributors, and forward the money to the proper place.

◆

Rough on Chicago Honey.—Mr. Stephen J. Harmeling, of South Dakota, recently had an article in the Northwestern Agriculturist, on "South Dakota as a Bee-Country," in which we find this paragraph:

> "The home market for honey is good. There is no trouble in getting 12 to 15 cents for extracted. The flavor of Dakota honey is superior. That of wild mustard is delicious. Chicago has sent too much 'Rose Honey' and 'Bumble-Bee Honey' into these markets. Chicago is really the meanest hole of a city on the face of the earth. We expect all that comes from Chicago to be adulterated. It is so notorious here that people who have ever tasted real honey can notice something wrong, and now they suspect everything that comes from the East, and will pay a good price for the home product, which they know to be pure."

We have shipt honey into South Dakota, and never sent any that was impure. There is plenty of pure honey in Chicago, or else the bee-keepers themselves are rank adulterators. And that we don't believe. The idea of any one saying that South Dakota people "expect all that comes from Chicago to be adulterated!" We don't swallow that at all. Any one with just ordinary sense ought to know that there is plenty of pure honey sent to Chicago—both comb and extracted—and that that same honey is often reshipt to purchasers in other parts of the country.

Goodness knows Chicago is not very Heavenly in many things, but we know there are lots of good people here, and pure honey, too. Mr. Harmeling will only harm himself by writing in the style indicated by the above quoted paragraph.

◆

Organization for properly conducted self-defense seems to be necessary everywhere. The latest thing of the kind occurred among the daily papers of Chicago. At a time when every one was eager for war news, and immense numbers of papers were sold, the Stereotypers' Union made a peremptory demand for a very material increase of pay under threat that no papers could be issued unless their demands were granted. The dailies saw they were in a tight place, but concluded to meet organization with organization, deeming the demands entirely unwarranted, and entered into an organization agreeing to stand by each other. The great reading public were greatly surprised to receive no papers for a few days, then a small-sized paper rapidly increasing to its normal size, and the supposition is that the Stereotypers' Union has been left out in the cold.

If bee-keepers would have their rights defended, they, too, must organize.

◆

Convention at Omaha, Sept. 13-15.—Finally the date of holding the next annual meeting of the United States Bee-Keepers' Union has been fixt for Sept. 13, 14 and 15. The place—Omaha—was decided upon several weeks ago. Here is a notice from Secretary Mason:

> STA. B, TOLEDO, OHIO, July 23, 1898.
>
> EDITOR AMERICAN BEE JOURNAL:—I have just received from Mr. Whitcomb the following letter in regard to rates, etc., for the convention of the United States Bee-Keepers' Union, which will explain itself:
>
> OMAHA, NEBR., July 18, 1898.
>
> MR. E. WHITCOMB—*Dear Sir:* Confirming our talk this afternoon, I wish to advise that the Western Passenger Association has put in a rate for the Annual National Encampment Sons of Veterans United States of America, Sept. 12 to 16, as follows:
>
> One lowest first-class normal tariff fare for the round-trip, plus $2.00, from Western Passenger Association territory, east of and including Utah, except that from points within a radius of 150 miles of Omaha rate of one fare for the round-trip will apply.
>
> The following rates apply from the extreme terminals on the east: Chicago, $14.75, Peoria, $13.25, and St. Louis, $13.50. Tickets on sale Sept. 10 and 11, and from points west of Colorado and Wyoming State lines, Sept. 9. From points within a radius of 150 miles of Omaha, Sept. 12. Tickets good to return Sept. 21.
>
> We will endeavor to have these rates extended to cover all the United States, and would suggest that it would be a very good rate for the bee-keepers' meeting.
>
> Yours truly, W. N. BABCOCK,
> *Manager Department of Transportation.*
>
> It will be seen that the above rates are lower than those given in my previous notice of rates. Mr. Whitcomb writes:
>
> "The above rate is the best in sight......Hotel rates and place of meeting will be arranged a little later on, but it is thought that the members can be quartered in private families at $1.00 per day, and that hotel rates can be secured at about $2.00 per day."
>
> This allows the Executive Committee to fix on Sept. 13,

14 and 15 as the time for holding the convention, commencing on the 13th at 10 o'clock in the forenoon, and closing the evening of the 15th.

The program for the convention is not yet quite completed, and will not be in time to be put in the monthly bee-papers before September, but will be in the American Bee Journal and Gleanings by Aug. 15. The program will be similar to the one prepared for the Buffalo convention last year, containing bee-keepers' music, and the first page of the cover will be occupied by an illustration containing the photographs of the Board of Directors and Executive Committee, with an appropriate background. Any one desiring one or more copies of the program can obtain the same by sending five cents in stamps to the Secretary, for each copy wanted.

If the place of meeting, hotel rates, etc., are not given in the bee-papers in time, those attending the convention will find a printed notice posted in each railroad depot in Omaha, on the days of the meeting.

Any one not a member of the United States Bee-Keepers' Union may become such by sending a dollar to the Secretary, or General Manager Secor, or the editor of any of the bee-papers. Don't send a dollar bill unless in a registered letter; and if you remit to me by post-office money order, have it drawn on Sta. B, Toledo, Ohio.

A. B. MASON, *Secretary*.

Now that the date of the convention is settled, everybody can begin to make plans for being present.

Remember the *date*—Sept. 13 to 15. And the *place*—Omaha, Nebr.

LATER.—Since the foregoing was put in type we have received the following letter that Mr. Whitcomb sent to Dr. Mason:

OMAHA, NEBR., July 22, 1898.

FRIEND MASON:—The Delone Hotel, corner of 14th street and Capitol avenue, is where the convention will be held, and which will also be the headquarters of the Union. Rates for rooms, on the European plan, $1.00 a day; board $1.00 a day. No one will be askt to double up, but each person will be given a bed, and be taken care of at this rate as long as there is a room in the house, even if it takes rooms that cost $4.00 a day.

In order to reach the hotel from the Union Depot, take the Dodge street car and transfer at 14th street for the Sherman avenue line; 5 cents pays the entire bill for carfare.

Those who desire to take rooms and secure meals outside will be at liberty to do so. Rates for meals at restaurants and chop-houses from 10 to 50 cents.

The limit of tickets will give 10 days in which to see the Exposition and attend the meeting. E. WHITCOMB.

◆

Getting New Subscribers.—Many of our regular subscribers have done good work in getting new subscribers for the American Bee Journal. We appreciate their efforts, and thank them besides sending them the premiums we have offered and they have earned.

But we want 1,000 more new subscribers by October 1—during August and September. That ought not to be a hard job when you consider the premiums we offer regular subscribers, on page 490, for the work of getting the new ones.

We are beginning all new subscriptions with July 1, as we have plenty of back numbers since that date, and as we want all the new readers to have a complete set of Mr. White's nine articles on "Profitable Bee-Keeping."

Perhaps some of our present subscribers would prefer to pay their own subscriptions instead of taking premiums for sending new subscribers. Well, we can accommodate them all right. Send us three new subscribers for a year, at $1.00 each, or *seven* new subscribers for the last six months of 1898, at 40 cents each, and we will credit your subscription for one year; or send us *four* new six-months' subscriptions at 40 cents each, and we will credit your own subscription for six months.

Now it seems that with all the offers we are making in various places in this number of the Bee Journal, the 1,000 new subscribers ought to come very easily in the next two months.

◆

☞ See "Bee-Keeper's Guide" offer on page 477.

THE WEEKLY BUDGET

EDITOR HUTCHINSON, of the Bee-Keepers' Review, in Genesee Co., Mich., reports the best honey-flow in years in his locality.

MR. J. W. KUHN, of Republic Co., Kan., has sent us a copy of his very neat catalog for 1898, offering improved golden Italian queens and bees for sale.

THIS INTERESTING (?) EDITORIAL paragraph we find in one of our apiarian exchanges:

"We are now out of Mason's fruit-jars, and as the price is nearly double what it was formerly, we will not purchase any more until they are lower."

MR. S. A. NIVER, of Tompkins Co., N. Y., writing us July 2, said:

"Clover was fine in looks, but yielded no honey. Basswood bloomed in great shape, but gives up but little surplus. Five pounds surplus per colony would be about my estimate. Buckwheat is our old stand-by."

MR. A. I. ROOT, of Gleanings in Bee-Culture, called on us last Friday, when on his way to Yellowstone Park, and other places in the great Northwest. Mr. Root seemed well and cheerful, and spent the day riding all over Chicago on our bicycle. We were glad we could furnish the "horse" for him to ride and put in a pleasant day. He rides like a boy and appears to enjoy life hugely.

MR. J. T. CALVERT, of the A. I. Root Co., spent about a half day with us July 22. He had been making a several-days' tour among some of the supply dealers in Michigan and Wisconsin, and found that they, like his own firm, had past through a very busy season. Mr. Calvert was looking well, and seemed to be ready for another grand rush in the bee-supply business. They are contemplating the making of extensive improvements and additions to their present capacity for turning out implements for bee-keepers.

MR. E. M. STORER, who has 200 colonies in the vicinity of the great Okefinokee swamp of Southern Georgia, writes that while he has considerable stock of extracted honey of this year's crop on hand in 60-pound cans and 500-pound barrels, destructive forest fires are responsible for a much shorter crop than would otherwise have been obtained. Our Southern friends seem to be "catching it" all around from fires this year. Our own apiary in South Florida has been no exception.—Editorial in American Bee-Keeper.

YE EDITOR spent two most enjoyable days at the home of Dr. C. C. Miller last week—Wednesday and Thursday. It was 90° above zero while there, but pleasant nevertheless, for that home is in a cool place—"set on a hill, and can't be hid"—and is very restful and refreshing. At least we found it so. Next week we hope to tell more about our visit to the "Medicine Man of the Marengoes." We returned just about an hour ago (Thursday evening, July 28), and will not have room in this week's number of the American Bee Journal to speak further of our trip.

THE A. I. ROOT CO. give a few statistics in Gleanings for July 15, as follows:

"In the year beginning July 1, 1897, and ending June 30, 1898, we have made about 16 million sections of all kinds and sizes, besides buying about four million from other manufacturers, and turning away orders for many more. Our output of Weed process foundation in the same time was 55 tons, while Chas. Dadant & Son made 33 tons, or 88 tons in all, or 176,000 pounds of Weed process foundation sold in the United States within the 12 months. Several tons of what we made was exported. Since we have been making fences we have turned out half a million of the various styles."

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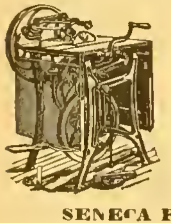

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QUESTION-BOX

In the multitude of counsellors there is safety.—Prov. 11-14.

Bees Hived on All Drone-Combs

Query 79.—1. Suppose a prime swarm is hived on all fully-built frames of drone-comb, what kind of bees will they rear, drones or workers?

2. If worker-bees were the result, would this not be a good plan to follow to secure larger bees, and consequently longer tongues?—Illinois.

O. O. Poppleton—I don't know.

W. G. Larrabee—1. I should say they would rear drones.

E. France—1. I never tried it. 2. You try it and report.

R. L. Taylor—1. Both. 2. No, you can't fool Nature that way.

P. H. Elwood—I haven't observed any worker-bees reared in drone-comb.

R. C. Aikin—1. Drones, drones, drones. 2. I don't think it will work one bit.

Dr. A. B. Mason—1. Both drones and workers, but more workers than drones. 2. I think not.

Mrs. L. Harrison—1. Workers. When the levee broke in the South, and the water drove the bees into the surplus

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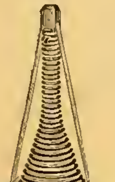

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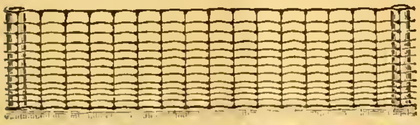

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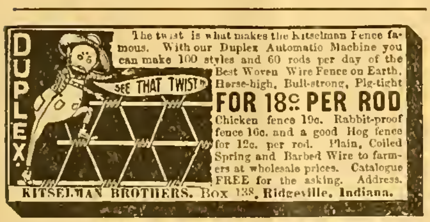

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arrangement, bees reared workers in drone-comb. 2. The workers would not be any larger.

G. M. Doolittle—1. Both. 2. Worker-bees from drone-comb are no larger than other workers, according to my observation.

J. M. Hambaugh—1. Oh, goodness; try and see. I don't know. 2. This would be a broad stride. Let us hear the result.

Emerson T. Abbott—1. Workers, if they wish; if not, drones. 2. It is not always the largest egg that produces the biggest chicken.

C. H. Dibbern—1. I think they would be mostly drones. 2. Yes, but would the workers produced in drone-cells, if any, be really larger?

Dr. C. C. Miller—1. The only time I ever tried it they didn't do either. They left. 2. Perhaps, but if I wanted to try anything of the kind I'd go at it gradually.

D. W. Heise—1. If the swarm will remain I would expect them to rear drones until they had time to reconstruct the cells into worker, which I think they would do.

Jas. A. Stone—1 and 2. I think they would change the cells to worker-cells as far as necessary, so the result would be a loss of that much time in making the change.

Dr. J. P. H. Brown—Both these questions are premist upon a violation of the bee-"constitution." Before they could be carried out the constitution would have to be "amended."

J. E. Pond—1. Drones and workers both, in my opinion. 2. No; for many tests have been made in this direction, without making any perceptible increase in the size of the workers.

E. S. Lovesy—1. Both. With us as a rule the majority will be workers. 2. I doubt it. I have never perceived any difference. But I have never made any experiments along this line.

Prof. A. J. Cook—1. I don't know. Who would hive them thus except for experiment? Try it, and you will know. 2. I doubt if it would work that way. May be they would leave in disgust.

Mrs. J. M. Null—1 and 2. I don't know. Personally speaking the boundary lines of practical, everyday bee-keeping are sufficiently extensive. "Might-be's" soar to inaccessible hights.

S. T. Pettit—1. Usually they will rear a fair proportion of both. 2. I could never see any difference in bees so reared from those bred in worker-combs. It might possibly add a little to the length of their tongues, but I doubt it.

Eugene Secor—1. They might try to reconstruct the cells so that workers could be reared, but I would not be surprised if they deserted the hive in disgust. 2. Do you think that the size of the cradle determines the size of the grown-up baby?

Chas. Dadant & Son—They will rear drones till they have managed to narrow down some of the cells. This experiment was tried by Drory, of Bordeaux, France, some 15 years ago, and the result was only a few eggs were laid that hatcht as workers.

Rev. M. Mahin—1. I have never seen it tried, and do not know. It has been said that under some conditions queens will lay worker-eggs in drone-cells, but

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I do not know that they will. 2. The size of the cell has very little influence, if any, on the size of the bee.

G. W. Demaree—1. Would they stay in a hive filled exclusively with drone-comb? Have you tried the experiment? I have not. If they could be induced to stay on drone-combs, no doubt but they would cut away at least a part of the drone-comb and build worker-comb in its place. 2. I have little faith in rearing big bees by any other process than that of selection in breeding.

J. A. Green—1. While I have never tried such a thing, I should suppose that both workers and drones would be reared, tho a larger percentage of drones than usual. 2. How could it have any effect on the succeeding generation? The queens would not be reared in larger cells than usual, neither would the drones. What have the workers to do with the succeeding generation further than to feed it and care for it, and what difference would their size make in these respects?

GENERAL ITEMS

Grand Honey Season.

We have had a grand honey season in this locality this year—the best I ever knew. I like the old American Bee Journal.
Wm. Aiken.
Ontario, Canada, July 23.

Wortman's Handy Tool.

The illustration of Wortman's handy tool for bee-keepers on page 451, makes it show the hammer on the edge. It is intended to be underneath to make it handy, as in raising brood-frames the hammer rests against a frame, answering for a fulcrum or stop. Otherwise the illustration is very good.
A. Wortman.

Bought Foul Brood.

I must tell what kind of a job a bee-keeper here has gotten into, only ¾ mile from my apiary, by not taking a bee-paper and keeping informed. He had about 40 colonies of bees, then bought 60 colonies the past spring that had foul brood in the worst form. I tried to get him to subscribe for the American Bee Journal, but he said he could get along just as well without a journal. My bees show no signs of the disease as yet.
E. E. Smith.
Lenawee Co., Mich., July 22.

Some Blunders—Bees Doing Nicely.

As usual, I have made a great many blunders this season, the greatest of which was to hive large swarms on starters. Heretofore I had used full sheets of wired foundation, and this season I wired my frames and put in a starter and hived large swarms. The result was drone-comb mixt in nearly all my frames. It is all right for young queens with a few bees, but it won't do in this locality.

I am becoming more convinced every season that large hives are the thing. I use from one to four 8-frame hive-bodies to each colony. I supersede all worth-

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I would have no difficulty whatever in getting twice 1,000 new subscribers this year, if all of the bee-keepers in this country had read the Review the past year. I have sometimes thought that it might pay a publisher to give away his journal one year, simply for the sake of getting it into new hands. There are, of course, decided objections to such a course; but I am going to come as near to it as I dare. Here is my offer:

If you are not a subscriber to the Review, send me $1.00, and I will send you twelve back numbers, the Review the rest of this year and all of next year.

Each issue of the Review, especially if devoted to the discussion of some special topic, is really a pamphlet containing the best thoughts and experience of the best men upon the topic under discussion. Twelve back numbers of the Review are, to a certain extent, so many little books devoted to as many different phases of bee-keeping. Some issues of the Review are now out of print; of others only a few are left; while of others there are several hundred. Of course, I shall send those of which I have the most, but no two alike.

Most people subscribe for a journal at the beginning of the year. In this case there is no use of waiting, as you will get the Review for next year just the same as tho you waited until next January to subscribe, and you get all the rest of the numbers for this year FREE. The sooner you subscribe, the more free issues will you receive.

Let me tell it over once more. For $1.00 you get twelve back numbers, the Review the rest of this year, and for all of 1899.

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We can furnish **White Alfalfa** Extracted Honey, in 60-pound tin cans, on board cars in Chicago, at these prices: 1 can, in a case, 7 cents per pound; 2 cans in one case, 6½ cents; 4 cans (2 cases) or more, 6 cents. The Cash MUST accompany each order.

☞ A sample of the honey will be mailed to an intending purchaser, for 8 cents, to cover postage, packing, etc. We guarantee purity.

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Does it stand up to the work? Don't the wheels get loose, the spokes rattle and the tires come off when the weather is hot? Don't the felloes and hubs rot and require much repair to keep the old thing in order during wet weather? These things are true at least of most wood wheel wagons. ***Stop the expensive repairs. Buy a wagon that lasts.*** There are two ways of doing this, one way is to buy

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less queens. I have some that keep 12 to 14 frames of brood through the spring and summer.

I give plenty of ventilation by raising the front of the hive on blocks, if needed. I never suffer the bees to hang out.

My bees are doing nicely this season. I have increast from 34 to 82, and have taken off some nice comb honey, and a lot on the hives now. We have a nice prospect for a fall flow.

J. T. HAIRSTON.
Cherokee Nation, Ind. T., July 20.

Comb Honey Breaking Down.

There has been some complaint of honey breaking down in the sections in shipment. I think it may be of some use to try the following plan:

In folding the sections, place them so that the part where they are matcht together will be on top, and in that end or side put the long sheet of foundation, and put the bottom starter in the other end. Now, when the bees fill the box with honey, reverse it, and have the matcht side or end down, so that the great weight of the honey will rest on the bottom of the box. The top of the box as it then stands will be smooth for any marking which one may wish to make on the box, and there will be very little breakdown.

WM. H. EAGERTY.
Republic Co., Kan., July 18.

Another Hive Tool.

Take an old horse-rasp, and draw it out wedge-shape 3 inches long by 1½ inches wide. Make the handle ¾ inches wide by ⅜ inch thick, and bend it to an angle of 15 degrees. This will be found to be a very handy tool for prying supers loose, and also for loosening frames. The angle of 15 degrees makes the handiest part of the tool. It may also be used for a chisel, and will stand all the pry you wish to give it.

Kendall Co., Ill. H. C. GORTON.

Crop Will be Light.

I had 14 colonies of bees in the spring, and have increast to 26. I lost one on a Sunday while at church; but one came to me from one of our neighbors. I would have more colonies but I doubled up some of the late swarms. The bees have been storing some surplus honey, but not a great deal. The crop will be light.

J. RIDLEY.
Winneshiek Co., Iowa, July 23.

Putty-Knife as a Hive Tool.

I frequently see in the Bee Journal something said about tools. I have been a bee-keeper for 10 years, and I have never found anything so handy as a common square-point putty knife. I don't think anything would take its place for cleaning supers, sections, scraping bottoms of hives, and hundreds of other things. If my bee-keeping friends have never used one, they should by all means get one and try it.

Mason Co., Ky. C. N. BOLINGER.

Illinois.—The annual meeting of Northern Illinois Bee-Keepers' Association, will be held at the Court House, in Freeport, Ill., Tuesday and Wednesday, August 16 and 17, 1898. All interested in bees are invited to attend.

B. KENNEDY, Sec., New Milford, Ill.

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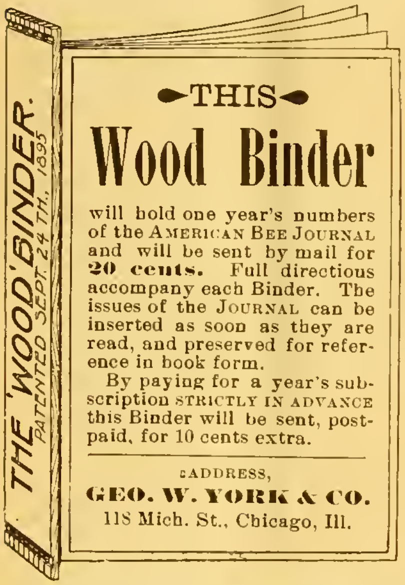

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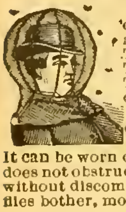

Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.

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Bee-Keepers' Guide, or Manual of the Apiary, by Prof A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages; bound in cloth and fully illustrated.

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Advanced Bee-Culture, Its Methods and Management, by W Z. Hutchinson.—The author of this work is too well known to need further description of his book. He is a practical and entertaining writer. You should read his book. 90 pages, bound in paper, and illustrated. Price, 50 cts.

Rational Bee-Keeping, by Dr. John Dzierzon —This is a translation of his latest German book on bee-culture. It has 350 pages; bound in paper covers, $1.00

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called BEES OF HONEY. 10 page pamphlet. Price, 40 cents.

Convention Hand-Book, for Bee-Keepers. Thomas G. Newman.—It contains the parliamentary law and rules of order for Bee-Conventions—also Constitution and By-Laws, with subjects for discussion, etc. Cloth, gold-lettered. Price, 25 cts.

Practical Hints to Bee-Keepers — by CHAS. F. MUTH. Also contains a Foul Brood Cure and How to Winter Bees. 40 p.; 10 cts.

Why Eat Honey?—This Leaflet is intended for FREE distribution, to create a Local Market. 100 copies, by mail, 30 cts.: 500 for $1.25; 1000, $2.00.

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Apiary Register, by Thos. G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00; for 100 colonies, $1.25.

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Bee-Pasturage a Necessity.—This book suggests what and how to plant It is a chapter from BEES AND HONEY. Price, 10 cents.

The Hive I Use, by G. M. Doolittle. It details his management of bees, and methods of producing comb honey. Price, 5 cents.

Dr. Howard's Book on Foul Brood. —Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cts.

Silo and Silage, by Prof. A. J. Cook.—It gives the method in operation at the Michigan Agricultural College. Price, 25 cts.

Winter Problem in Bee-Keeping, by G. R. Pierce. Result of 25 years' experience. 30 cts.

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Bee-Keeping for Beginners, by Dr. J. P. H. Brown, of Georgia. A practical and condensed treatise on the honey-bee, giving the best modes of management in order to secure the most profit. 110 pages, bound in paper. Price, 50 cents.

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Commercial Calculator, by C. Ropp.—A ready Calculator, Business Arithmetic and Account-Book combined in one. Every farmer and business man should have it. No. 1, bound in water proof leatherette, calf finish. Price, 40 cts. No. 2 in fine artificial leather, with pocket, silicate slate, and account-book. Price, 60 cts.

Bienenzucht und Honiggewinnung, nach der neuesten methode (German) by J. F. Eggers. This book gives the latest, most approved methods of bee-keeping, in an easy, comprehensive style, with illustrations to suit the subject. 50 pages, board cover. Price, 50c.

Green's Four Books, by Chas. A. Green. —Devoted to, 1st, How We Made the Old Farm Pay; 2nd, Peach Culture; 3rd, How to Propagate Fruit-Plants, Vines and Trees; 4th, General Fruit Instructor. Nearly 120 pages. Fully illustrated. 25 cts.

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Kendall's Horse-Book. — 35 pictures, showing positions of sick horses, and treats on all their diseases. English or German. Price, 25 cts.

Lumber and Log-Book. — Gives measurements of lumber, logs planks; wages, etc. 25c.

Maple Sugar and the Sugar Bush, by Prof. A. J. Cook.—Full instructions. Price, 35 cts.

Grain Tables, for casting up the price of grain, produce, hay, etc. Price, 25 cts.

Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others.—Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 30 cts.

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The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only ONE book can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted, see postpaid prices given with the description of the books on this page. Following is the clubbing-list:

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Select-Tested Golden Adel Queens.

Each, $1.00. A practically non-swarming and non-stinging strain of golden bees. "How to Prevent Honey Candying" given to each customer. Tested Queens, each, 75 cents.

26Atf **HENRY ALLEY, Wenham, Mass.**

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, July 20.—Not any of the new crop of comb honey on the market this week; what little has come sold at 11@12c. Extracted brings 5@7c for the white, according to quality; ambers, 5@6c. Southern, fair to good grades, 4@5c. Beeswax, 27c.

Market is in good shape for disposing of honey of all kinds. R. A. BURNETT & CO.

Kansas City, July 9.—New comb, No. 1, white, 11@12c; amber, 10@11c. Extracted, white, 5@5½c; amber, 4@4½c. Beeswax, 22 to 25c.

Old stock of honey all cleaned up. Few shipments of new in market.

C. C. CLEMONS & CO.

New York, July 30.—There is some little new Southern comb honey on the market, mostly irregular quality and selling at from 9 to 11c. Extracted of all kinds is in good demand. Common grade Southern, 50 to 52c per gallon; good, 55 to 57c.; choice, 5 to 5½c. per pound; some exceptionally fine lots sell at 6c. Beeswax is very quiet at 26 to 27c.

HILDRETH BROS. & SEGELKEN.

Boston, July 9.—Fancy white in cartons, 13c.; A No. 1 white in glass-front cases, 11 to 12c.; No. 1, 10 to 11c; No. 2, 8 to 9c. Extracted, white, 6 to 7c; light amber, 5 to 6c. Beeswax, pure, in good demand with very light supply, 30c.

At the present time the demand for both comb and extracted honey is very light with but little stock on hand.

BLAKE, SCOTT & LEE.

San Francisco, July 20.—White comb, 8½ to 10c; amber, 6½ to 7½c. Extracted, white, 5½@6c.; light amber, 4¾ to 5¼c. Beeswax, 23@25c

The ship Roanoke, clearing from this port for New York on the 16th inst., carried 179 cases of extracted honey of 1897 crop. There is some new crop honey on the market, both comb and extracted, but no large quantity of either. New comb of fairly choice quality is offering in 1-pound sections, and in a small jobbing way at 10c. per pound. Quotable values for extracted show no change.

Detroit, July 21—Fancy white, 11@12c; No. 1, white, 10@11c. Extracted, white, 5@6c; dark, 4@5c. Beeswax, 25@26c.

New honey is arriving, but prices are hardly establisht. M. H. HUNT.

Minneapolis, July 26.—Fancy white clover comb is now selling at 11@12c.; amber, 10½c. Extracted fancy white clover, 5½c.; amber, 4¾@5c. Dark grades, both comb and extracted, not wanted at low prices.

S. H. HALL & CO.

Indianapolis, July 18.—Fancy white comb honey, 12@12½c; No 1, 10@11c. Extracted, white, 6@7c. Beeswax, 25@27c.

Only a few arrivals of fancy white comb; market almost bare, and demand good. Quite a little comb honey from honey-dew is being offered, but there is simply no demand for the stuff. WALTER S. POUDER.

Milwaukee, July 14.—Fancy 1-pound sections, 11@12c; A No. 1, 10@11 cents; No. 1 8@10c; amber, 7@7½c; dark and old, 6@7c. Extracted, in barrels, kegs or pails, white, 6@6½c; dark and amber, 4@5c. Beeswax, 26@28c.

Since our last the sales of honey have not been large, altho a fair demand has existed and continues, altho the fruit consumption makes some difference with eaters of honey. There is not a very large supply of old stock left, and we shall be in good order for new crop both extracted and comb. The outlook is good, A. V. BISHOP & CO.

Buffalo, July 9.—There is a very good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

St. Louis, July 9.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

WESTCOTT COM. CO.

Cincinnati, July 9.—Demand is slow for all kinds of honey, especially comb. Prices for best white comb honey, 10 to 13 cents. Extracted honey brings 3½ to 6c, according to quality. Beeswax in good demand at 25 to 28c for good to choice yellow.

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We can now furnish the very best that can be made from pure wax. **Our New Process of Milling** enables us to surpass the previous efforts of ourselves and others in the manufacture of Comb Foundation.

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Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**
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3 " Queens.	3 50
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About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

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Why does it sell so Well?

Because it has always given better satisfaction than any other.
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What more can anybody do? **Beauty, Purity, Firmness, No Sagging. No Loss. PATENT WEED PROCESS SHEETING.**

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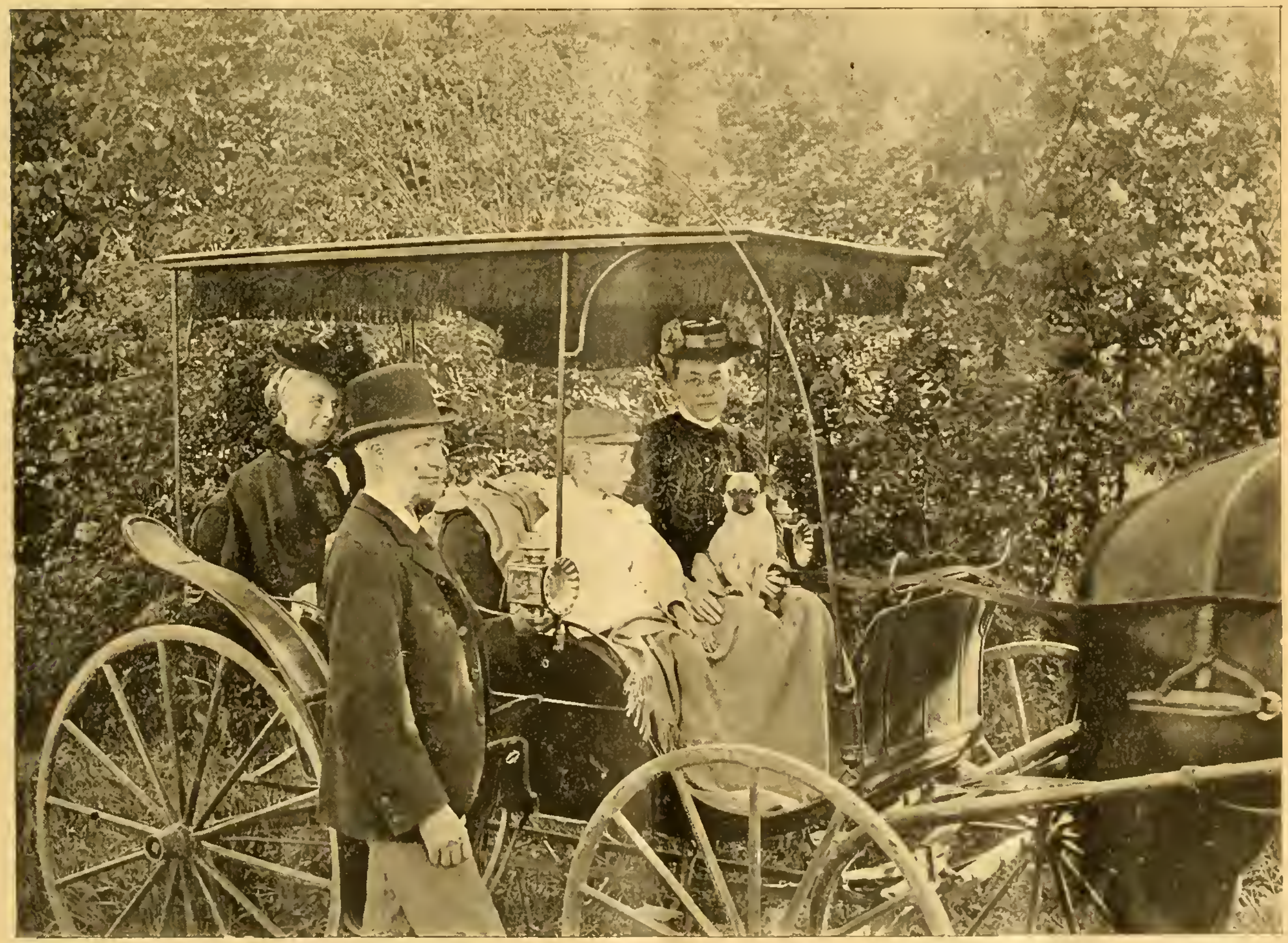
Mr. and Mrs. Thos. Wm. Cowan.

It will be remembered by our readers that Mr. and Mrs. Cowan called on us last May, when on their way back to England from California, where they had spent the previous 18 months. In Gleanings for July 15 appeared the picture which we show on this page, and which that paper has kindly loaned us.

As our opinion of Mr. and Mrs. Cowan is so well echoed in an editorial written by Ernest R. Root, that was printed in the same number of Gleanings in which the picture was shown, we reproduce it almost entire, as follows:

Some of our readers will remember that Mr. Thomas Wm. Cowan, Mrs. Cowan, and their son, an electrical engineer, have been sojourning in California for several months past for their health. The condition of all three has greatly improved. While Mr. Cowan, Jr., remains, Mr. and Mrs. Cowan left there a few weeks ago, stopping on their way at the homes of some of the bee-keepers of the United States. They called on Mr. York, of the American Bee Journal, and on Dr. C. C. Miller. In writing to Dr. Miller recently, I mentioned



Mr. and Mrs. Cowan, and Mrs. E. R. and Master Leland Root.

the fact that I was enjoying a visit from Mr. and Mrs. Cowan, and in reply he writes this, which I give to our readers:

DEAR ERNEST:—I congratulate you heartily on the opportunity of a visit from Mr. Cowan and his wife. I do so with some intelligence after having enjoyed the treat myself. They came just at a time when work was in such shape that I couldn't stop for anybody—just couldn't stop. But I did stop for three days, and gave myself up to the abandon of thinking there was no work to be done while they were here; and altho it may take two weeks to catch up, I'm not worrying over it.

Along with a strong desire there was also just a shade of dread of the coming of two such prominent people; but they brought with them a large stock of common sense and loving kindness, and immediately we were at ease. Mr. Cowan impresses one as a man with a wonderful fund of information, but who has hardly discovered yet that he is any better off in that respect than the ordinary mortal. It so happened that while he was here I had sent me a letter and a newspaper clipping in a foreign language. I didn't even know what was the language—thought by the looks of the printed part that possibly it might be modern Greek. But Mr. Cowan read it off at sight. It was Russian. It made me feel I'd like to begin life over again and be a linguist.

Mrs. Cowan is so simple and unassuming in her manners that just at first one is hardly ready to recognize in her a woman of unusual intellectual attainments; but gradually the fact appears, and, along with very clear perceptions of the truth, she is possest with an intense zeal that others shall see the truth as she has learned to see it. My wife, who had more opportunity than I to become acquainted with her, gave as her verdict, "Mrs. Cowan is a woman that lives to do good."

The present war seems bringing closer together a good many people. At the close there will be no gap between the North and the South; and England and America, mother and daughter, will be closer than ever before. "We be brethren."

C. C. MILLER.

The Doctor's impressions of the two were exactly my own—in fact, of all Rootdom. Notwithstanding Mr. Cowan is the most talented and best informed bee-keeper living to-day, I believe, having traveled over nearly all of the civilized world; notwithstanding he reads eleven different languages, and speaks perhaps half as many; notwithstanding honors of various kinds have been conferred upon him by different societies for the advancement of science; notwithstanding he is editor of the British Bee Journal, and president of the British Bee-Keepers' Association, he is one of the most modest men I ever met. Unassuming and quiet in his manner, one cannot fail to be imprest that he is in the presence of a master of our pursuit.

Without doubt he has the most extensive library relating to bees of any man in the world. He has been all his life gathering together rare and old volumes pertaining to bees; and it does not make any difference what language they are printed in, he reads them just the same. He pronounced some of the bee-books we have, dating back two and three centuries, as being exceedingly rare and valuable—such as, for instance, Butler's Feminine Monarchy, printed in 1609, or two years before the publication of the common version of the Bible; also Hill's treatise on bees, printed in London in 1608.

When Mr. Cowan was here in 1887 he had with him his big microscope with which he has made some of his exhaustive researches. This instrument is one of the finest in the world, and was made by Mr. Cowan himself. Father once pronounced it the finest piece of handwork he ever saw.

I found Mr. Cowan to be well verst in all the modern and ancient practices of bee-keeping. It seemed to amuse him that so many ideas were being discovered in these latter days that have been fully described in former works. For instance, the modern starvation cure for foul brood is fully described in Della Rocca's works, written over a century ago, and printed in 1790. He was also amused at the way we Yankees have of inventing things that his countrymen invented and afterward discarded.

On the afternoon of one of the days he was here, Mr. and Mrs. Cowan, Mrs. Root, Master Leland, and myself, took a drive down to our basswood apiary. I felt that when so distinguisht a personage was here I must not fail to take along my camera, and so I requested the privilege of a "shot" or two, which was kindly granted; and I also askt if I might present the result of that shot to our readers. With some reservation this privilege was also granted. Mrs. Cowan is shown in the back of the buggy, Mrs. Root in front holding the dog Trix, and Master Leland in front of Mrs. R. From the picture one would think it impossible to go between the trees, but such is not the case. Of course, we do not need to point out Mr. Cowan.

Mrs. Cowan is as simple and unassuming in her manners as her husband; and the fact gradually begins to dawn on one, when he begins to know her better, that she is a woman of more than usual intellectual attainments, as Dr. Miller well says. She is a very earnest and able advocate of the doctrine that the ten tribes of Israel, after their carrying away to Assyria, 133 years before the sacking of Jerusalem (when Judah and Benjamin were taken to Babylon) were not lost by absorption into other nations. She claims that the Bible justifies us in believing that those Israelites migrated to Central Europe and became the Anglo-Saxon nation; that England is Ephraim in prophecy, and the United States represents Manasseh; that the religion and principles of these two nations will spread all over the world and become dominant.

It is not necessary for me to refer to the members of my own family, unless it is to the dog Trix (I count her) that eats more honey than any other canine living. The other day she showed she was very fond of raw bananas and raw tomatoes; and for taffy she has a "sweet tooth." I have not tried her yet on a chunk of comb honey, but I have no doubt she would whine for that as she does for everything else in the sweet line.

ERNEST R. ROOT.

Mr. and Mrs. Cowan anticipate returning to this country the coming fall, as their health is much better when on the Pacific Coast. We shall hope at that time to have more time to spend with them. Like Dr. Miller, when they came here, it was in the busiest time of the year—it required all our time to look after the mail orders for bee-supplies, so that we were really ashamed that we could not devote more time to our distinguisht visitors. But being a wise man, and acquainted with the requirements of bee-keepers at that particular time of the year, of course Mr. Cowan was able to take in the situation, and we hope he made due allowance for our apparent inappreciation of our English friends.

Neither Dr. Miller nor Mr. Root have spoken too highly of Mr. and Mrs. Cowan. We feel that they indeed merit every good word that has been said concerning them.

CONTRIBUTED ARTICLES

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PROFITABLE BEE-KEEPING,

WITH

HINTS TO BEGINNERS,

BY

C. N. WHITE, OF ENGLAND.

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

No. 6.—FOUNDATION.

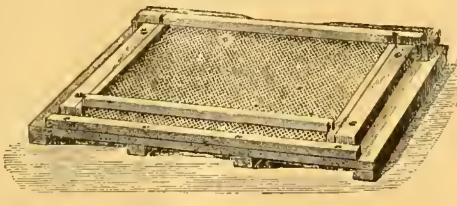
Those who keep bees in skeps and boxes are at a serious disadvantage when compared with their more fortunate brethren in the craft who use a modern style of hive. The latter are aids to success which prove of very great importance. If we compare two swarms, one in a skep or box and the other in a modern pattern hive in which is a provision for saving the bees many days' labor, we can't fail to see that for several days the bees in the skep are busy making combs of wax which they secrete from the honey they are gathering daily, while bees in the wooden hive, if of the same capacity, will have converted the sheets of foundation into combs in from 24 to 48 hours, and during the remainder of the time the other bees are laboriously building combs below, they are rapidly filling their supers. In many cases, owing to the wane of the honey-flow, or change of weather, the days thus saved make the difference between full and empty supers.

The foundation referred to as an aid to success is wax in sheets that have been past through a machine somewhat like a small mangle, the rollers of which have been cut in such a manner that they impress on both sides of the sheet the shapes of worker-cells. Foundation is undoubtedly one, if not the most valuable, of the many devices the modern bee-keeper makes use of in the profitable management of the apiary. A frame fitted with a full sheet of foundation and put into a good colony during the summer will on the following day not only contain a partly-workt-out comb, but the newly-built cells will in all probability each contain a tiny egg. The great value of foundation cannot well be over-estimated, and therefore I strongly advise its use on all occasions when practicable. The cost—2s. per pound (less in quantity)—is a really small item when the amount of extra surplus resulting from its use in the brood-chamber, as well as supers, is taken into consideration.

As generally made there are about six sheets the size of standard frames to the pound, tho seven to ten for wiring are sold. It is not, however, advisable to have a sheet of less thickness than seven sheets, at the most, to the pound will give, even for wiring; as thin sheets are apt to sag and spoil the appearance and usefulness of the combs.

The fixing of the sheets of foundation in the saw-cut of top-bars of frames has been explained in a previous article, but tho the foundation is by this method expeditiously fixt in the frames, the latter must be handled very carefully, otherwise the new combs will fall out. Then again the least move of the hive from a horizontal position by accident, or the settling of the ground after rain, will throw the combs, which are being built together, out of the frames; neither can colonies with such combs be moved without fear of the combs collapsing, except when they become tough by usage.

All these disadvantages disappear by wiring the sheet of foundation into the middle of the frame. The foundation is not only placed in the right place and kept there, but the saw-cut in which the wax-grub is often found may be done away with, by using a plain top-bar.


Fixing Foundation in Frames.

To wire a sheet of foundation into a frame proceed as follows: Put through the side-bars towards the inside of the frame, a thin French nail about an inch in length, half an inch from the top, and an inch from the bottom, and turn the ends with a pair of small pliers to form hooks; then lay the frame down to be better able to follow the instructions. Let the bottom-bar be near and the top-bar away from the operator. Now take about two yards of No. 30 tinned wire, make a noose on one end and hook it on the nail near the bottom of the side-bar on the left hand, run it across to the other bottom nail, pass it through the loop, and thence through the hook at the top of the same side-bar; then carry it across under the top-bar and pass it through the top hook on the other side-bar. The nails, as we have come to them so far, we will number from starting, 1, 2, 3, 4. We have now to run the wire along near the bottom of the frame up to the top and across under the top-bar to the left hand side. Now draw the wire tightly and take it back to No. 3, which gives two wires under the top-bar. From 3 pass the wire under the middle of the bottom strand that runs from 1 to 2; pull tight and carry it over No. 4, and then down the left hand side to No. 1. From No. 1 pass it over the middle of the lower of the two strands under the top-bar, finally drawing it tightly and fastening it off at No. 2. If the wire has been drawn taut during the process of wiring the bottom strand, one of the top strands will be drawn inwards, and by the crossing of the wires a diamond will be formed in the center of the frame.

Next procure a piece of board to just fit inside the frame while being only half as thick. Tack onto the back of this board laths top and bottom to project beyond the side-bars, so that when a wired frame is laid upon the board these projections hold the frame with the wires just resting upon the board. The frame is then raised while a sheet of foundation is placed upon the board and then returned. The wires, which are now lying upon the foundation, are ready for embedding. The next step is to press the wires down until they are embedded in the middle of the sheet of foundation. Various devices are employed to do this work properly, but there is not one worthy of mention save the "Woiblet" spur embedder. This is a tootht wheel, and if it is placed in hot water, and when hot run along the wires, they will sink down and remain in the foundation, while the bees build their comb upon it. When the combs are completed the wires will be seen running along the mid-rib at the bottoms of the cells.

Tho the saw-cut in the top-bar of the brood-frames may be dispenst with, it should be retained in the shallow frame top-bar, for wiring in this frame is not necessary, and the use of a saw-cut for fixing the foundation will be simple and effective.

The foundation to be used in sections must, as the honey therein stored is eaten with the wax, be very thin and irreproachable as regards color. In dipping the boards in the wax-tank only thin sheets are taken, and these when set are past through the rollers of the foundation-mill adjusted so that the thinnest sheet possible may be produced. The best super foundation will give nearly 100 sheets, four inches square, to the pound; therefore the sections in five crates may be fitted with full sheets of foundation for 3s., the price of a pound of super foundation. Full sheets are not really necessary, tho they are an advantage, and consequently triangular pieces may be used. Whether full sheets or "starters"—as small pieces are called—are used, they must be fixt in the middle of the section and firmly attacht to the top. This may be done by bending the edge of the sheet or starter and pressing it firmly upon the part to which it is to be fixt; or while held in position a little melted wax should be run along the edge of the sheet which will attach it securely to the middle of the top of the section.

A simpler and most satisfactory way of fixing is to procure sections that have a slanting saw-cut through the middle of the end which, when the section is placed in the crate, will be the top. In putting the section together it is completed except that the half of the top is left unfastened until the edge of the foundation is placed upon the level, when it is closed, thus completing the section and holding the foundation securely in the middle.

FEEDING BEES.

The second, and by no means the least in importance of the aids to success is feeding. Food given judiciously is of immense advantage, for without it many bee-keepers would undoubtedly have empty instead of full supers. Food in some form may be required in the spring to help on a colony to its full strength in readiness for the honey-flow; it is none the less needful during the summer, when through a continuance of unfavorable weather loss by death is otherwise inevitable; but it is often of supreme importance at the end of the season, so that there shall be surrounding the bees food enough to serve not only for the daily wants but also through the early part of the year, when tho new honey is not being gathered the stores are drawn upon largely for brood-rearing.

The best bee-food at all times, if it could be given, is certainly honey, but in its place the only substitute admissible is *pure cane-sugar* either in its dry state or in the form of syrup.

Syrup is best used when a supply must be given quickly, as in the case of a colony on the verge of starvation, or at the end of the season when making up the necessary quantity of food for wintering. There must, however, be a difference in the consistency in the spring and autumn syrups—in fact the latter should be about twice that of the former. The reason for this difference is that in the spring the bees leave the hive for water with which to thin the food they, in their capacity of nurse-bees, prepare for the queen and grubs; and when syrup is given with a good proportion of water, these journeys to the pump or drains are rendered unnecessary, while in the autumn, unless syrup about the consistency of honey is supplied, the bees will have considerable trouble in getting rid of the superfluous moisture in order to seal it over; and if they could not do this the syrup remaining exposed might, and probably would ferment and cause dysentery.

Syrup is made by melting (boiling is not necessary) three pounds of cane loaf or white crystallized sugar in a quart of hot water, for spring food; and six pounds to the quart of water for autumn feeding.

If syrup is given from the close of the honey-flow to induce a continuance of egg-laying, much of it will be stored in the cells. To prevent this and at the same time save trouble, dry sugar feeding may be adopted. For this purpose the best kind of sugar is Porto Rico, because it is a fine-grained, pure cane-sugar. Demarara is not recommended, for two reasons: chemicals are used in the manufacture of some samples, and the grains are too large for satisfactory work. The Porto Rico may be given in any manner so that it does not get wasted, and is in a position to receive the moisture from the brood-nest.

A simple method is to fill a basin with the sugar and press it level; then place upon it a thin board, in the middle of which two or three holes have been bored or burnt with a red-hot poker, about the size of a finger-end. If then the basin with the board under it be inverted, and placed on a hive immediately over a hole in the center of the brood nest—that is over a hole in the quilts—the moisture arising from the brood-chamber below would be absorbed by the sugar and thus provide a food that the bees would be able to take. But it would be exactly what they require for brood-rearing, a slow but continual supply. If this simple method of feeding is used up to the middle of September, an examination of the hive then will reveal an extensive brood-nest, a large quantity of bees, but most likely, as must be expected, not sufficient food stored to carry the colony through the winter. Then is the time when there are plenty of bees, young and old, and mild weather, to give quickly as much syrup as will make their future safe. The bees will have time to ripen and seal it over, and will then go into winter quarters in a thoroughly satisfactory condition.

[Continued next week]

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No. 2.—The A B C of Marketing Honey.

BY HERMAN F. MOORE.

[Continued from page 483.]

Before going any further in this A B C school, let me exhort you all to remember that this is no play school; that the walls of our school-room are decorated with pictures of the Patriarch Jacob (Gen. 43-11), Solomon (Prov. 24-13), Aristomachus, the celebrated Sicilian apiarist; Dzierzon, Von Berlepsch, Adam Grimm, Samuel Wagner, L. L. Langstroth—men of deepest, broadest thought and culture—men who gave their lives to work and study and scientific investigation among their beloved bees—men who found a long, peaceful life among the hives all too short to fathom all the mysteries, to solve all the problems.

In the spirit of deepest seriousness, then, let us approach our study, realizing that only by years of constant application can we hope to approach perfection, in even the simplest forms of human industry.

Look at shoes, dry goods, cloaks, hats, woolens, etc.; in all these lines men are required to put in two to five years' work in the factory or counting-house before they are considered worthy to sell a dollar's worth of goods from a grip or sample trunk. Why? Because an inexperienced man, ever so innocently, might damage their business thousands of dollars. Let us learn from these great lines of merchandise, that control the world's business, that it is no slight thing to go among the people and ask for their trade; that no amount of education, investigation, culture and labor is too great to bring to your aid in this work.

In order to succeed you must be everlastingly at it. Don't go at it by fits and starts, for remember the people eat three times a day, and 365 days in the year, and sometimes more.

Don't be satisfied with anything less than calling on every family in your county, and if possible in every adjoining county.

Now as to the kind of honey we are going to sell. Decide on the start always to sell the best only; we need not dwell on the question of purity, for I take it for granted that no bee-keeper will ever sell anything but pure honey.

Let me beseech you, if any case of adulteration comes to your notice, when a bee-keeper is guilty of such practices, go to him first in private, taking with you a neighbor who is also a bee-keeper; ask him to "quit his meanness" at once and forever. If he goes on doing wrong, and injuring our vocation—one of the most honorable—prosecute him without fear or favor, and call down upon his head, by legal process, the utmost penalties of the law.

By the best honey is meant clear, well-ripened honey, of flavor agreeable to the trade that will consume it. This is, of course, a relative term. In the Middle States white clover and basswood are the best, tho they allow of a small percent of honey from golden-rod and buckwheat without detracting from the fine flavor that most pleases the people. In the rainless, irrigated districts of the West and Southwest, honey from the alfalfa clover takes first place, tho a small mixture of say 5 per cent. of cleome or other honey will not condemn it if otherwise good.

In California black and white sage lead, very likely more or less mixt with other flowers that happen to bloom at the same time. Now here is the point: Use the greatest care in importing honey from one of these districts to another. People were never more suspicious of anything they don't understand than at the present day, and if you follow your own fine clover product of one year with sage or alfalfa the next year you may need to be deep in the confidence of your customers, or use lots of persuasion and explanation to avoid having the cry of adulteration raised against you.

The writer has been all through this experience. In the 80's he sold thousands of pounds of California honey in Toledo and Cleveland, Ohio, under its proper name, and a fairly good grade as well. At first the name was popular, no doubt from the well known excellence of California fruits. But the difference between Ohio white clover, and sage from California was so markt that no permanent demand for the sage could be workt up among people accustomed from childhood to clover honey; and even to this day, in certain localities, California honey is considered another name for adulterated honey.

Any of the very mild flavors of honey must be condemned for use in any other locality than their own. The majority of consumers desire a deep, strong honey-flavor, and one-third buckwheat or golden-rod will often correct a too-mild flavor. I go into this matter because if you have a good trade in honey you must sell them honey 12 months in the year, and you will have good years and poor years for honey-production, and in poor years you must of necessity buy some honey of your near and far neighbors, and even from friends in other States.

Be sure to keep the quality of your liquid honey right up to the top, for by so doing you will find that your sales of extracted honey will be far greater than in comb honey, your profit will be the greater, and the certainty of your making a lasting success of selling honey will be all the more sure. Remember that any lasting success always must mean good profits and increasing sales.

The matter of deciding upon the size of package and price per pound of comb and extracted honey is one that must receive our careful attention. If you are able to call upon each customer in your route, once in three months, your standard size of package should be such that it will last an average family of five persons for two months, leaving them some time to get hungry for more before you call again. The average family will buy honey only four times a year, if you can sell them 5 to 15 pounds at each sale. This manner of selling will add greatly to your profits by lessening the expense of handling, for it will cost you as much to sell one pound to a private family on your route as 10 pounds.

Some may say, "My trade will not buy 5 to 15 pounds at a time." In this you are in error. The average customer will buy anything that is offered to him, if he is satisfied about quality and price. The quantity is entirely secondary. To prove this, the writer has sold honey in large-sized packages ($1.00 to $2.50) for years, when at the same time people could go to a grocery and buy one pound or less almost everywhere. This may seem like a puzzle, but the reason is near. Families everywhere are always glad to buy their produce of whatever kind from the one who raises it, because they get fresher stuff and better quality than when purchast of the ordinary dealer. Instances: A friend once purchast 12 dozen fresh-laid eggs of the writer, that his brother had sent him, with no objection, when six eggs could have been purchast at any grocery. Many families, that are favorably situated, are accustomed to buying five to twenty dollars worth at a time, especially in the fall, of potatoes, apples, meat—in fact anything that the farmers raise and offer for sale from their wagons.

In deciding upon the price per pound to ask for our honey, several things must be considered. Your expenses in any business are usually two times as much as you have estimated that they will be. You must pay expenses and have a small or large profit for yourself out of every pound of honey you sell. This is the way business is conducted all over the world. Any other method leads to certain failure.

In selling to the consumer we are entitled to the highest market price in our locality, for our labor and expense is much greater in proportion than when selling the same goods at wholesale.

In determining the price in your locality, go to the best and highest-priced retail grocery-houses and inquire their selling price without letting them know you are a producer of honey. You are sure then to receive a truthful answer. If you sell to families in their town, do not cut their price, for people who want the best goods will be more certain to buy if you charge a good price. Of course, you must use your judgment about small fractions of difference, but this is a good general rule.

If you should begin by cutting prices you can't afford to keep it up, and you will wish you never had sold your honey too low when you undertake the task of putting back the price up to where it should have started. If you don't lose half or more of your customers I miss my guess. One of the greatest advantages you will find in selling to the consumer is that the quality and not so much the price is his great desideratum.

[Continued next week.]

Selling Comb Honey to the Grocery Trade.

BY G. K. HUBBARD.

Altho there have been publisht a number of articles on the subject of selling honey, I thought it possible that I could contribute something on this that would be helpful, and that might encourage some one to make an effort in this line who has dreaded to undertake it. The object of this article is to encourage those who have a crop of honey to dispose of to sell it at the groceries in neighboring towns, thus accomplishing the desired result of getting better prices and keeping the small shipments from going to the city commission-men.

We Californians are doubly interested in keeping honey from going into the city markets, for the reason that we are compelled to sell our product there. There is no escape from it except for those who have small amounts to sell. Our honey must of necessity go to market in carload lots of 1,000 or more cases, and it is only the large cities that can handle it in such quantities. The smaller cities and flourishing towns offer a splendid market at fair prices, and ought, in nearly every case, to be supplied without the grocers having it shipt in from the wholesale cities. The cost of getting a pound of comb honey to the Eastern market, counting the loss from having to pay the freight on the cases, is about 2½ cents for freight, if shipt in car lots. Less carload, if we care to take the risk of breakage, the cost per pound, with the extra crating necessary, is 4½ cents. This extra 2 cents, with the accompanying risk, shuts us out of any markets except those that can handle honey in car lots, and this leads me to emphasize the point that the smaller cities should be supplied from the surrounding territory, and the city markets largely left to those who are of necessity compelled to use them.

Now, my reader, if you have a crop of comb honey of from 20 cases anywhere up to 200 or so, I suggest that you sell it to the grocers in your surrounding territory. You may answer that you are not a salesman; that it takes time and ability to push off your crop a few cases at a time; that you would prefer to take less for it and see it all go at once than to get more in smaller sales. Of course, you would if the difference were not too great; but the difference is too great for you to afford if you wish to make the best success from your pursuit. Suppose it does take time to sell a crop; if it pays you well for your time, can you not afford to take it? I wish to urge you strenuously to make a brave trial and see if you do not get along better than you expected.

I am going to give some experiences and suggestions, and will say at first that you might make a score of calls and not use many of the ideas; but if I give you the idea of how it can be done, your tact and good sense will suit your talk to the right person. I cannot map out a minute program for you, but I can give you some insight of a plan that has proved very profitable to me, and incidentally you will learn something about my ideas of having a crop in such readiness for market that it will command the highest price the grade will bring.

You probably know all that is to be known about your own home market. You often go to town to do your trading, and know as well as any man in the community about how much honey your grocers have on hand, and what the possibilities are for business. As an almost invariable rule you will never make a large sale in the town you are best acquainted. Your merchant will say, "I might take one case of you. You are in town often, and I can get more of you almost any time." Therefore, I urge you to make a longer drive, get out of your own immediate community, where you will have a fighting chance of selling several cases to one customer.

Start with a load of 10 to 20 cases, according to the size of the place you are going to visit. Put on the best suit you have; collar and necktie; if you ever wear cuffs, do not leave them off this time; give your shoes an extra good shine, and look just as neat as possible. You are not a farmer or bee-keeper now; you are a business man, and are going out to do business in a businesslike way. Take along your horse-feed if you wish; but go to a modest hotel where you can get a meal for 25 cents, and have the almost as desirable point of being able to wash and to brush the dust thoroughly from you, from hat to shoe-sole. I do not think I overestimate the value of your personal appearance. While clothes do not make the man, they do, very largely, make the estimate that people place upon you, especially among strangers. You will walk with a firmer tread, and feel more like business, if your appearance is not being criticised, but, instead, is helping you to appear as if you meant business. I trust my reader's good sense to understand me aright, and do not think I advocate unreasonable extremes.

You know what your honey is worth, and the price you ought to get, which should be enough above the price at which you hold the entire crop to pay for the time you put in distributing it. Adopt your prices for your different grades, and stick to them, treating all alike. It is all right to miss a sale occasionally on this account, as it will save you so much time, and be such a help in making sales to these parties in the future.

Being all in readiness to be your own "drummer," go to the leading grocer, and be as pleasant and polite as possible. Make your business known at once, for busy men do not care to talk much with strangers about the weather, crops, condition of roads, etc.

"I have driven over from Blankville with comb honey, and this case is a fair sample of my best grade. I take a great deal of care in producing a good article, and casing it up fair, and I think, if I could sell my load to you, you would find it to give good satisfaction to yourself and to your customers."

Of course, he will look at the honey, and likely pass his opinion upon it, comparing it with the honey he has handled. You will soon know whether he is at all interested or not, whether he is well stockt, whether or not he is supplied regularly, as his trade demands, by some home bee-keeper who is his regular customer, and who may put an article on the market that compares favorably with yours. If there is no chance at all for a sale, bid him a pleasant good-day, and tell him you will probably see him again some time when he is nearer ready to buy. Then if he wants to visit a little with you, and start an acquaintance, meet him half way, letting him make the advances; but make it short, and leave him with the impression that you are out for business, and that your business is just as important to you as any other man's business can possibly be to him. The next grocery you call at the man you take to be the proprietor is busy. After waiting a little, and you see he is not apt to be through with his customer very soon, you start out. Likely he or one of the clerks will inquire if you wish to get anything; but you reply that you have a little business with the proprietor, and that you will call again in a little while. Thus you save your own time, and impress the grocer that you are a man of business, and too much of a hustler to waste your time waiting for some independent chap to give you a little of the time he wants you to think is so extremely precious.

At another grocery you see at once that the proprietor is interested in what you have. He has but little honey, or none at all; and when you see there is probably a chance to sell him some you say, "I have just come to town, and have talkt to but one man. I am very sure you could do well with the honey I have if I could sell it to you. I have only 15 cases with me—7 of the fancy grade and 8 of the dark; and if I could sell you my load, I am confident you would realize well on the purchase."

He looks at you with eyes wide open; he thinks to himself, "Fifteen cases of honey at one purchase? Gracious! wonder if he thinks I sell all the groceries used in this county." But all the same you have made a favorable impression. You have flattered him by assuming that he is one great big merchant, and you have imprest him with the idea you are to do business on a big scale.

"Fifteen cases? oh! I couldn't use that much. You see, the grocery business is terribly cut up here. There are many stores, and of course every man has his friends. We never buy very heavily. We keep pretty close to the shore, as the saying is; but then I don't mind buying a few cases of you if I can get it right."

If you had taken in a case and askt him to buy it he would hardly have thought of asking for more; but now that you put the idea into his head of buying the load, he feels safe in risking a few cases. Likely you sell him three of each grade. You set the cases in a conspicuous place, and he remarks that it looks like enough to run his trade for three months; but you thank him for the money, and wish him better luck in moving it than he imagines. You certainly would not have sold him six cases if you had tried to sell him one, and it is almost as certain you would not have sold him six if you had not first talkt up the sale of your load.

Now, you go back to the man who was too busy at your first call. You tell him your business, and where you are from, and that, as he will be soon out of honey, he is interested in what you have to say; but he is one of those men who always wants to cut and slash prices; and to do this he begins to talk hard times and low prices.

"I have only nine cases of this left, and I should like to sell you the lot."

"But your price is too high."

"I do not think so, considering the quality I furnish."

"But I can get it shipt in from the wholesale houses and commission-men in Blank City for at least a cent, and likely a cent and a half, less than your prices, and get my business discounts besides."

"It is barely possible that you can do as well; but I very much doubt about your getting as good value for the money as I offer you. There is the risk of your not getting as good an article as you expect when you place an order, and also risk of breakage in transit. I am right here with the honey; every section of it is in first-class condition; you can see exactly what you are buying, and if any case I sell you is not as represented I will take it off your hands next time I come over, without any hard feelings on the part of any one, or a lot of unpleasant correspondence over such a matter. I sell to every one alike; and while it is natural for every buyer to want to do a little better, and have a small advantage over his competitor (and I do not blame you for it), at the same time I know by experience that it is more satisfactory all around to treat all alike. You can make 25 percent easily enough on my honey at the prices I offer; and the rebate of the cases when empty, if you will let me have them back in good condition, will more than equal the business discount you mention. If you had these nine cases standing up front here, I do not doubt it would attract as much attention, and make as fine a show as any lot of honey you ever handled."

He tries to beat you down on the price, but you are firm, tho very gentlemanly, and, as a result, he concludes to take two cases of fancy and two of dark, after you have reassured him that you will be over again in 60 days or so, and will pay him 10 cents each for the empty cases if he keeps them in good condition.—Gleanings in Bee-Culture.

[Concluded next week.]

⁂

Foul Brood in the San Joaquin Valley, Calif.

Some pertinent and interesting facts are brought out by the county inspection for the purpose of stamping out foul brood, a bacterial disease of great virulence and destructive ability.

In Fresno County.—J. A. Roberts workt at inspection from April 11 to May 28. He lost his first two weeks' record, but in five weeks he visited 150 places, inspected 2,038 colonies, and found 196 infected with foul brood. He says he found none of the disease west of the West Park colony, but two north of Fresno, and they had been moved from a diseased district. He found nothing east of Malaga, north or south of Easton. He confined his work principally to that section of the country where the disease existed.

Notes on the Disease.—Foul brood is a disease that kills the young bee in the larva state, after it has been capt over. The dead larva becomes a shapeless mass, of a coffee color, and, by running a straw into it, you will find it thick and stringy. It will stretch out, and, when it pulls in two, will fly back like rubber. Brood that dies from any other cause is watery and generally of a lighter color. The young bee retains its shape, and will not string out, as in foul brood. Any one who will watch can soon learn to take care of his bees and stop the disease should it get started.

How the Disease Spreads.—He finds a great many people who have only a few colonies, who take no care of them, and do not see the brood, and when one colony dies from the disease the other bees in the neighborhood carry off the honey, and so the disease is scattered; and it goes on until it will destroy the bee-industry if not checkt. He is confident that a good bee-inspector can eradicate the disease in two years more by working two or three months each year. It has been done in other places, and can be done here. He thinks, as he has quit the work, that the disease will not spread much before next spring, when he thinks some one ought to be appointed to look after it as soon as the spring will justify.

In Tulare County.—Josiah Gregg was inspector, and he workt from April 18 to June 4. He inspected 4,478 colonies—an average of 127 colonies per day. He found nine colonies infected with foul brood, and took the proper measures to have them properly attended to.

The County Bee Interest.—There are about 10,000 colonies of bees in Tulare county. Among the larger apiaries are the following: J. F. Boldan, 430 colonies; R. H. Fray, 343; Richard Hyde, 233; J. C. McCubbin, 278; S. B. Halton, 180; Henry Miles, 150; Carmichael & Thompson, 175; Hunsaker & Nelson, 140; William Wilkinson, 126; Clark Decker, 104. The average amount of honey extracted from each colony for the year 1897 he finds to be about 100 pounds.

Instances of Honey-Yield.—Clark Decker, who lives near the Lamberson ranch on the west edge of the county, near Waukena, had 84 colonies last year. From these he got six tons of extracted honey, and one ton of comb honey, or 14,000 pounds altogether. This year he has 104 colonies, an increase of 20. Most of this large amount of honey is shipt away to San Francisco and eastern points. Some of it realized 5 cents a pound the past spring, tho most of it sold at less than 4 cents.—Pacific Rural Press.

CONVENTION PROCEEDINGS

Report of the Utah Bee-Keepers' Convention.

The Utah Bee-Keepers' Association held their semi-annual meeting April 5, 1898, in Salt Lake City.

Pres. Lovesy called the meeting to order, the minutes of the October meeting were read and approved, and also the financial report.

The election of officers resulted as follows: President, E. S. Lovesy; Vice-President-at-large, George Hone; Secretary and Treasurer, John B. Fagg, of East Mill; Assistant Secretary, G. E. Garrett.

The following county vice-presidents were chosen: Salt Lake county, Frederick Schach; Utah, William Peay; Wasatch, J. A. Smith; Davis, Wm. C. Smith; Boxelder, J. Hansen; Weber, C. O. Falkman; Juab, Thomas Bilston; Sevier, C. Canutesen; Washington, Mrs. Woodbury; Tooele, Benjamin Barrows; Cache, Henry Bullock, and Morgan, T. R. G. Welch.

Pres. Lovesy spoke in part as follows:

"I can congratulate our bee-keepers that in some respects we meet under more favorable conditions; still there are other conditions that we would very much like to see improved. We now have a good foul brood law, and we should get it in force all over the State, especially where there is any danger of disease. This law can be made a practical success for the benefit of our bee-keepers and for the protection of the bee-industry, so that if there is any failure in the matter the fault will lie with the bee-keepers.

"The Langstroth monument fund—some of our bee-keepers are interested in this matter. Out of 100,000 or more bee-keepers in the United States, one would think that something handsome should be done to mark the last resting place of our departed friend, the greatest of all American bee-keepers.

"Co-operation in the purchasing of supplies and in the marketing of our products are questions which I hope this convention will take into consideration.

"Adulteration by middle-men, and the getting of our products on the markets at a reasonable price, are the most interesting and difficult problems that confront the whole of the agricultural pursuits of the United States to-day. Some claim that over-production is the cause of the trouble; while I admit this to be true to some extent, there are other vital questions that seem to be lying out beyond this in obscurity, which the people seem slow to grasp or grapple with.

"For the general benefit of the bee-industry of our State I hope to see a good exhibit of our products sent to the Trans-Mississippi Expostion at Omaha."

Mr. Welch said that foul brood inspectors were needed to look after the bees of those that do not make a business of bee-keeping. He cited a case through which the disease was scattered all over a neighborhood. Messrs. Butler, Corwall and Johnson also discust this question at length.

Mr. Smith spoke in regard to buying sections and other supplies. He said that bee-keepers should buy them in carload lots. The subject of supplies in general were discust by Messrs. Peay, Woodmansee and Schach, the prevailing opinion being that nearly all supplies except sections are as good and cheaper at home.

J. B. Fagg spoke on the adulteration of honey, and said that all packages should be labeled exactly what they contained; that an effort was now being made to get a National law past on this subject. Mr. Lovesy and others also spoke on this subject. It was shown that a law of this kind would be of much benefit to the bee-industry, as the practice of mixing glucose with the best grades of honey was carried on in Eastern cities.

Mr. Terry spoke on the marketing of our bee-products. A general discussion followed, and while it was shown that much good could be accomplisht in this matter if a strong combination in the interest of bee-keepers could be formed, no definite conclusions were reacht.

J. B. FAGG, *Reporter*.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Getting Bees Into the Sections.

My bees are doing very poorly this season. I have taken but 10 pounds of honey from 4 of them so far. I also have one colony that does not go into the super—only sit around and will not work in it. What can I do about it? Would it be a good plan to take out brood-frames to extract, and give them empty ones in such a case? ILLINOIS.

ANSWER.—Thousands of bee-keepers are in the same predicament. The season is a poor one, and altho there may be plenty of flowers, the flowers do not yield honey. There's nothing in the world for you to do but to bear it patiently and hope for a better season next year—unless, indeed, the situation is so desperate that you must feed to get them through the winter. Of course, in some localities, the season is excellent, but according to reports in general, this is probably as poor a season all over the country as was ever known.

Rearing Drones in the Fall.

How can I rear drones in the fall to mate with late queens? SUBSCRIBER.

ANSWER.—After the close of the harvest, the workers usually set earnestly to work to kill off all useless consumers, and it's a difficult thing to get them to start a fresh lot. You may do something toward it by feeding a colony regularly for some time, thus inducing them to believe a harvest is on again. An old queen in a strong colony promises more of success than a young queen, or an old queen in a weak colony. An unusual amount of drone-comb in the center of the brood-nest will be an additional inducement.

Better not depend on rearing late drones, but rather depend on saving the lives of those now on hand. That's a comparatively easy matter. Give any drone-brood you may now find in any hive to a queenless colony, and the drones will be respected till they have a fertilized queen. Postpone that time by taking away from them their queen-cells, giving them a fresh frame of unsealed brood once a week.

Wintering in a Building—Wax in a Brood-Chamber—Value of Foundation, Etc.

1. Would you advise putting 19 colonies of bees (for winter) in a frame building 8x10x7 feet high, built of stock boards and battened, with a tight floor six inches from the ground? Chaff cushions to be put over the bees and straw packt between the hives; ventilation to be provided at the roof.

2. Or, would it be better to fill up with earth to the floor?

3. Is it a good plan to bore a small hole in the end of the telescope-cover to provide ventilation?

4. In melting up the combs of the brood-chamber, how much wax ought there to be?

5. How much do you consider foundation in full sheets worth in the brood-chamber? That is, in time and honey.

6. The bees have stored something in with the clover honey this year, that is as dark as buckwheat. Is it honey-dew? ILLINOIS.

ANSWERS.—1. Buildings above ground for wintering bees have not generally been very successful. For your locality, if a good cellar can be had, you may do well to try that.

2. Probably it would make little difference.

3. Yes, altho generally the fit is not so close as to make it necessary.

4. That depends something on the manner of melting. If the combs are very old, the cocoons in the cells are like so many little sponges, and will soak up a large part of the wax. If the combs are broken up fine and thoroughly soakt with water, you will get out most of the wax. At a guess, I should say that an average brood-chamber might yield a pound or a pound and a half of wax. But I really know nothing positive about it, and will be glad if any one who has positive knowledge from experience would correct my figures.

5. I don't know. Probably the chief value is in getting straight combs with no drone-cells. Good authorities tell us that there is very much more gain in having foundation for the last half of the combs built by a swarm than for the first half. That is, that they will build the first half of their combs very nearly as soon without foundation as with it, and yet it is so important to have combs that are to last a life-time just right, that it may be better to use foundation for all.

6. Most likely. It seems to be a somewhat general complaint.

Feeding to Finish Sections.

I would like to know how to feed bees to finish the sections? IOWA.

ANSWER.—Use a strong colony with a young queen, preferably of black blood, dilute the honey to be fed—I think those are the principal points to be lookt after—using a feeder that contains a goodly amount. W. Z. Hutchinson is one of the few who say they can practice it profitably. I confess I can't, and I very much doubt if you will find it advisable.

Candy for Queen-Cages.

How is the candy made that is used in queen-cages? TEXAS.

ANSWER.—The Schultz or Good candy, such as is used in queen-cages, is not difficult to make. The materials used are powdered sugar and the best quality of liquid honey. Better have the honey heated—perhaps it is better to say warmed—for if you scorch it the candy will be bad. It can be more quickly made if well warmed. Start with very little honey mixt in with the sugar, for if you're not careful you'll have it so soft that you'll have to mix in so much more sugar to get it stiff enough that you'll have a larger batch of candy than you desire. Add a little sugar at a time, stirring it and kneading it, till you get it into a stiff dough. After it stands a day or so, you may find it thinner than you supposed, and you can knead in more sugar. When you get it stiff enough so it will lie for a day in a dough-like lump without running, it's all right for use.

Why Did the Colony Leave?

How can I manage a colony of bees when they will not stay in the hive with plenty of honey and young brood? I had a colony that would leave the hive and go off. It first went to a neighbor's bees, in with a colony, then came out and settled on an apple tree. Then I brought them back and clipt the queen's wings. They then would come out every day and go back and leave the queen crawling around on the ground. They kept on for several weeks, going out and staying about ¾ of an hour every day, then I would get the queen, and when they were returning I would let her out and she would go in. What was the trouble? NORTH CAROLINA.

ANSWERS.—Altho you don't say so, the fair supposition is that this was a swarm that refused to stay in the comfortable quarters provided for it. You say there was plenty of honey and brood. That was probably what made the whole trouble. When a colony swarms, if you return it to its own hive it will swarm out again. The bees want a place to commence housekeeping afresh. You gave them "plenty of honey and young brood," and they thought it was just about the same as they had left, so they would have none of it. If the supposition is correct, the remedy is plain. Don't give them a "hive full of honey." Give them a clean empty hive. Bees are freaky creatures. Sometimes they might not object to quite an amount of honey and brood, and again they may object seriously, and the more times you put them back the more determined they are not to stay. If the hive is in a hot place, that makes it all the worse.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

AMERICAN
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

Place and Date of Next Meeting:

Omaha, Nebr., Sept. 13, 14 and 15, at the Delone Hotel, Cor. 14th Street and Capitol Avenue.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

A Mistake is made by a few subscribers every year in asking that their paper be discontinued on account of the poor season. This is a very short-sighted policy. Surely any bee-keeper can spare one dollar a year for a bee-paper, whether he has a honey crop or not. He really cannot afford to do without the paper, even if he has no crop, for during the year he fails to get the paper he will likely miss enough good advice, short cuts described, new things brought out, etc., to pay for many years' subscription when a good crop of honey comes his way.

We always dislike to discontinue a subscription for any cause except when a subscriber goes into some other business requiring all his time; and yet there are some who are so interested in reading about bees that they will have a bee-paper even if not keeping any.

In many localities this year there is a failure of the honey crop. Such failures come no matter how careful and diligent the bee-keeper has been. Of course the only thing to do is to "grin and bear it," hoping that next year the bees will be able to do better. In the meantime prepare for doing better work, by reading and planning.

If you are fortunate enough to have honey to sell this year, study to get the most out of it financially. Much good advice on marketing is publisht every year.

◆

Omaha Exposition and Convention.—Mr. Louis R. Lighton might appropriately be called a "Lightoning" shorthand writer. He it was who reported the national convention of bee-keepers at St. Joseph, Mo., in 1894—the report that the Secretary of that year failed to turn over for publication. We presume he has it yet safely tuckt away somewhere. But Mr. Lighton did his part all right. He has been engaged again, this time to report the convention at Omaha, Sept. 13, 14 and 15. From a letter Mr. Lighton wrote us July 26, we take the following, which is of interest just now:

> The apiary building at the Exposition is one of the finest buildings on the grounds, and the exhibits are *superb*. Messrs. E. Whitcomb, L. D. Stilson, and August Davidson—all of Nebraska—are putting forth every effort to make the exhibit a splendid success, and they are succeeding.
>
> Too much cannot be said in the way of inducing bee-keepers to attend the convention of the United States Bee-Keepers' Union. Nebraska will send at least 500 delegates.
>
> Dr. Miller and Mr. A. I. Root will be interested to know there are "talking seals" in connection with the Exposition. Now keep them away, if you can!
>
> LOUIS R. LIGHTON.

The last paragraph settles it—Dr. Miller and A. I. Root will be there. And we shouldn't wonder if Editor Abbott will be found "s(t)ealing" around somewhere near to "talk" with those seals.

◆

Our Visit to Dr. Miller's, July 27 and 28, we promist last week to tell something about in this number. For the benefit of the new readers we will say that the Doctor lives in McHenry Co., Ill., about 65 miles northwest of Chicago. He has three apiaries—one at home, one three miles north, and the other five miles south. In all there are some 300 colonies, 120 being at the home apiary.

Last year the Doctor's crop was over 17,000 pounds of comb honey; this year—well, it will likely not reach 1,000 pounds. Tho there was a profusion of white clover bloom—which is his main dependence—it seemed to yield no nectar, or at least the bees failed to work on the blossoms to any great extent.

We saw in the Doctor's shop a pile of 24,000 sections all in supers, with foundation, ready to set right on the hives when needed. But they will likely wait until another year to be used.

Many of the Doctor's hives are very old, and weather-beaten, warpt, etc., and the frames in them are just a little different in size from the standard Langstroth—9⅛x17⅝. Desiring to have all on the regular size frame, he was changing them over on thick-top frames, both end and side spaced—at the ends staples being used, and at the sides nails driven in to within ¼ inch. The bottom-bars of his new frames are the same width as the top and end bars, and heavier than usually made. In them he had full sheets of foundation, not wired, but with four or five perpendicular splints of wood sunk into the foundation after first being boiled in beeswax to prevent the bees gnawing them out.

He was using a new ventilated cover of his own invention. It is made of ⅜-inch stuff, the under pieces being crosswise of the hive, and the upper lengthwise, with a ⅜ strip nailed between them around the edges, thus leaving a hollow space. The whole top is then covered with tin, and painted white. The upper lengthwise pieces extend beyond the lower crosswise pieces about an inch at one end, which serves for a hand-hold to lift the cover from the hive. The whole thing, nailed and painted at the factory, costs 25 cents. But as such a cover cannot possibly warp or leak, and will last a lifetime, it is quite inexpensive.

The forenoon of the first day we spent in the apiary clipping queens' wings and in other manipulations, indicated as necessary by the Doctor's annual record book. In this book he has a complete record of each colony in connection with its number. It is his constant guide and companion during the season, and materially aids him in his work with the bees. He has saved these books for the past 25 years, and they form an interesting library of themselves.

Miss Emma Wilson, the Doctor's sister-in-law, has been his chief helper in the apiary for many years. She was formerly a school-teacher, is thoroughly informed on all matters pertaining to bees and their management, and could write most helpfully out of her large experience—if only she could be induced to take up her pen.

Mrs. Miller is in every way the Doctor's equal in good-nature and general goodness. But we almost incurred her displeasure by suggesting that she allow us to put her picture in the Bee Journal with that of the Doctor, as they appeared one day when Editor E. R. Root was there and took several snap shots at them.

We might write further of our pleasant two days' stay at the home of the apiarian "Sage of Marengo," but will close with a reference to one of the worst cases of robbing the Doctor ever had, and of which he was heartily ashamed.

It occurred the first day we were there. We had helpt the Doctor put more hive-bodies with combs containing some brood and honey on a pile that he had already placed in the care of a colony—perhaps six stories high. But the colony was not sufficiently strong to care for so many combs, especially when some of the old hives had ample cracks and holes that it was somewhat difficult to close up.

Well, the robbing began about noon, and it was a sight. From top to bottom of the pile the robber-bees just swarmed. The Doctor soon got a sprinkling-can and several pails of water and began to put it on the pile of hives and the robbers most thoroughly. They had a complete and continuous bath for quite awhile. Then a large armful of straw was brought, and thrown on the hive-entrance and wet down.

Well, the shower-bath was kept up almost all the afternoon, and by night the insurrection was pretty well put down. The next morning all was lovely again.

Strange as it may seem, tho all the other hives in the apiary were raised up on inch blocks, not one of them was attackt by the persistent robber-bees, and that with no honey coming in.

◆

What the Union Ought to Do?—Some time ago this question was askt in the Question-Box department of this journal:

> "What would you advise in order that the membership in the United States Bee-Keepers' Union may be so increast as to make it of the greatest possible good to the bee-keeping pursuit?"

In reply to the foregoing, Hon. R. L. Taylor said:

> "You have the cart before the horse. 'Make it the greatest possible good' to its membership, then its membership will be sufficiently increast."

Editor Hill, in the American Bee-Keeper, in referring to Mr. Taylor's answer, wrote thus:

> "Mr. Taylor is not in the habit of vocalizing his thoughts without due consideration, and we are, therefore, led to cherish the hope that his full ideas in this connection were not exprest in the Bee Journal. Hence we beg to propound a supplemental question: How can the Union be made of any possible good (not to say 'the greatest') to its members without an increast membership?"

Whereupon Mr. Taylor replies to Mr. Hill's "supplemental question" as follows, in the Bee-Keepers' Review:

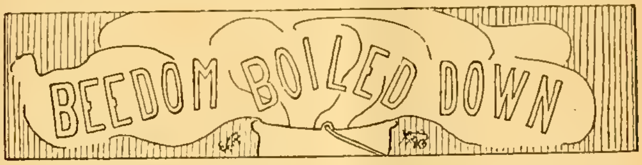
> "I answer, the membership of the Union is already large, and its resources abundant. Let its officers make a determined and effective campaign, offensive and defensive, against the evils and dangers that threaten bee-keepers and bee-keeping, and doubters will fall in rapidly enough."

We beg to correct Mr. Taylor in his first sentence above. The Union's membership is not large, nor has it abundant resources. There are not yet 500 members, so there can't be $500 in the treasury. As one of the Union's officers, we do not think it worth while to begin much warfare with so little ammunition on hand. Adulteration of honey is the great evil threatening bee-keepers most, and that should be attackt next, but surely Mr. Taylor would hardly begin a fight against such an enemy without more than $500 in the treasury. In our opinion there should be $1,000 to begin with, and a possible $1,000 more to draw upon when needed.

Mr. Taylor is an able lawyer. He knows how expensive is efficient legal talent. We think *he* would hardly want to commence the prosecution of even one big adulterator here in Chicago, and expect to win, with less than $500 at his command. Why, we could name several large honey-adulterating firms here that would simply laugh at the presumption of an organization that numbers only a few hundred members, with an equal number of dollars, attempting to fight their millions of dollars!

"A determined and effective campaign" can hardly be waged "against the evils and dangers that threaten bee-keepers and bee-keeping" until the United States Bee-Keepers' Union is in a position to back up its efforts with the same kind of shot and shells as the foe can hurl—dollars, dollars, dollars. It takes money to conduct a war, as the United States is finding out very fast these days. The Union might as well learn that from observation, as it would be compelled to learn it by actual experience.

As Mr. Taylor is not a member of the United States Bee-Keepers' Union, we must conclude that he is one of the "doubters" he mentions in his last sentence. It seems to us that it would be far better for him to "fall in" and help increase the membership and treasury by sending his dollar to General Manager Secor, instead of staying on the outside and "doubting."



Against Ants in Hives, Le Progres Apicole advises the use of chloride of lime in little dishes in which stand the feet of the bench that supports the hives.

The Department of Criticism in the Bee-Keepers' Review seems to be given up almost entirely to controversy between the critic and Dr. Miller. Both the men might be better employed.

Do Bees Move Eggs?—H. Rohrs, on page 381, thinks he has a case that proves they do, but R. L. Taylor, in the Bee-Keepers' Review, thinks the eggs found in that case were the work of an enterprising worker.

Guarding Against Foul Brood.—Editor Holtermann thinks there is no danger of getting foul brood through a queen, but that there may be danger through the food that comes in the queen-cage. So he would not let the bees have the food that comes with a queen.—Canadian Bee Journal.

Contraction of the Brood-Nest.—The editor of the Bee-Keepers' Review, with characteristic frankness, says he was wrong in thinking contraction of the brood-nest had never been practiced with establisht colonies at the time of putting on supers. He doesn't believe in such contraction, but he does believe, as do many others, in contraction at the time of hiving swarms.

A Conundrum.—The July Canadian Bee Journal quotes the item from page 330 in "Beedom Boiled Down," and remarks, "Friend York is attacking a man of straw. Where did Holtermann ever say that Root said so? In reply to that conundrum another may be askt: "Where did York ever say that Holtermann ever said that Root said so?" And how can York be attacking a man of straw, when no attack whatever is made? If Mr. Holtermann will again read carefully the item he has quoted, he will find that it is not an attack, but merely an effort briefly to chronicle some of the thrusts and parries in the engagement between Messrs. Holtermann and Root.

* * *

Wintering Bees on Solid Combs of Honey, D. W. Heise says, in the Canadian Bee Journal, he has seen practiced with entire success, altho formerly he was an utter disbeliever in the practice. In that connection he takes occasion to call this department of this paper "Bee-Doom." If that young man finds this Boiler after him with his little stirring-stick, he will think it will "Bee-Doom" enough for him.

* * *

Making Bees Fly in Winter.—D. W. Heise says it sometimes happens that on a day in winter when the temperature rises to 50°, one colony will rush out and have a good flight, while another sitting beside it, apparently like it in every respect, remains dormant. In such case he thinks it good practice to stir the latter to action by removing the cap and top packing, letting the sun shine directly on the quilt.—Canadian Bee Journal.

* * *

Systematic Pilfering.—The item under that head on page 394 of this journal is quoted by Editor Holtermann, of the Canadian Bee Journal, the item ending by saying, "But by all means, Mr. Holtermann, be sure you first follow the instruction given by the Great Teacher, in Matthew xviii, 18." To this the editor replies:

"Did it hit. When the editor of the Canadian Bee Journal transgresses as per above, he will be obliged if you will let him know it."

No wonder Editor Holtermann felt guiltless of any charge on reading Matthew xviii, 18, but if he had read the verse intended—the *15th* verse of the same chapter—he would have found these words:

"Moreover, if thy brother shall tresspass against thee, go and tell him his fault between thee and him alone: if he shall hear thee, thou hast gained thy brother."

That remark, "Did it hit," (by the way, Mr. Holtermann, you ought to use an interrogation point after "Did it hit," also after another question in the same column)—that remark makes this Boiler feel sure he is the guilty party. He confesses the crime, is sorry for it, promises never to do so again, asks pardon of the editor of the Canadian Bee Journal, and will anxiously watch the editorial columns of that paper to see that pardon duly proclaimed.

The Weekly Budget

Hon. Eugene Secor, of Winnebago Co., Iowa, wrote us July 27: "Honey is going to be a light crop."

Hahnemann, a German tailor still living in South America, was the inventor of the queen-excluder.—Gleanings.

Messrs. R. H. Schmidt & Co. wrote as follows, Aug. 4, regarding their trade this year:

"We have had a very large rush of business this season, exceeding that of previous years, and we are now making plans for enlarging our plant."

Mr. John Cline, of Lafayette Co., Wis., is an old bee-keeper. He wrote us thus when sending in a new subscriber lately:

"I am taking the Bee Journal—can't do without it. I have been tending bees for 66 years, and think I know something about how to get along with them, but I find something new and valuable in the Bee Journal."

Dr. Peiro, as we announced his intention some time ago, started for the Pacific Coast last month. After reaching Salt Lake City, Utah, and seeing Mr. E. S. Lovesy, the President of the Utah Bee-Keepers' Association, he wrote us from there as follows, July 28:

Dear Friend York:—You see where I've come to. Just arrived this afternoon. I lookt much like the chimney sweeps of old, so begrimed with the sweat and dust of travel. But a fine bath and fresh linen soon improved my personal feelings. It was after so exhilerating a performance that I called on Mr. Lovesy. I found him very cordial and up to his ears in honey. He states the flow has been very good, and the evidence shown me quite proves the statement. I never saw nicer, whiter alfalfa comb honey anywhere. I got a pointer or two regarding the prevention of swarming, which I will tell you about when we meet again.

I am glad to have met Mr. Lovesy, and only regret I could not avail myself of his generous invitation to visit his apiary, some 15 miles distant, among fields of sweet clover and alfalfa.

So far on my journey I have had a fine trip, but I have reasons to believe that henceforth I'll strike it dry and hot.

Kindest regards to you, Mrs. Y., and office force.

Fraternally yours, Peiro.

As many of our readers know, Dr. Peiro is a good neighbor of ours. He expects to be gone about a month, and will likely call on other bee-keepers. We shall expect quite an interesting report from him when he gets back from his "tower" through the great Western country.

Mr. A. I. Root's Chicago Visit we mentioned last week. The following is a little description of what he saw in one or two places in this great city:

On account of the rain when arriving I stopt at the Great Northern Hotel, near the depot. It is 18 stories high, and things are in fine style, I tell you. I should like to show you an electrical device that turns out the electrical lamps when you take the key out of the door of your room. If you remove the key from the door when you are on the *inside*, the lights don't go out.

When you go into the bathroom it is lighted up and stays lighted until you go out; as soon as you go out and shut the door the lights are out. This modern hotel has many similar surprises.

I am writing these notes on a shady seat in Lincoln Park, close beside the Aquatic Garden. Water-lilies of gorgeous hues, and as large as dinner-plates, are all about me. Yes, and the celebrated Victoria Regia is near, and in full bloom, too. Almost all the water-plants are in bloom. The water-poppy is a pretty plant, and seems to thrive at common temperature. Some water hyacinths of immense size, far larger than those in Florida, are making a beautiful show just now.

I came over here on a wheel that the editor of the American Bee Journal was kind enough to loan me. Very early in the day I askt a policeman (near the big hotel) if he could tell me where I could rent a wheel this early. He thought awhile and then said, "Oh, yes! I can fix you out exactly; there is a fellow that sleeps in that place right over there, just to catch such trade, but you will have to make a —— of a racket to get him up." Now this policeman was very kind and gentlemanly with the exception of that blank word. Would it be too great a thing to expect of the Chicago police, or would it be too great a task for them to consider that the stranger asking for information *might be* a christian, and that he *might be* greatly pained to hear talk like that?

I am afraid I have said it before, but I *must* say it again, never before in my life have I seen such entrancing, gorgeous beauty as the scene before my eyes, as I sit contemplating an acre or two of bedding plants in Lincoln Park. The flowers and plants are not new, but their grouping and contrast form a harmony of colors that I did not before know was possible. Several things perhaps combine to give me this *thrill* of joy and pleasure.

You see it rained last night, and the warm rain was just what the plants "thirsted" for. I have had a wheel ride and then a delicious nap here in the shade of a tree, with the lake breezes "fanning my brow." Then there are boys and girls all about me. Little ones are trudging along delightedly with their pas and mas, lunch baskets, tin pails, etc., for they have come out on the street cars and are to have a picnic in this beautiful place. Besides the flowers there are animals and birds; birds of plumage that rivals the flowers, and beautiful fountains are playing and splashing on this warm July day.

I don't know what this great and beautiful park cost, but say what you choose of Chicago she has done a grand and noble thing for her people, especially for her *children*, in making this beautiful spot where they can get pure air, exercise and health. I have visited the parks of nearly all of our great cities, and I would put Chicago ahead of them all.

A. I. Root.

☞ See "Bee-Keeper's Guide" offer on page 477.

FOR THE READERS OF THE AMERICAN BEE JOURNAL.

PROFITABLE BEE-KEEPING,
—WITH—
HINTS TO BEGINNERS.......

By Mr. C. N. White, of England,

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

Mr. White is owner of one of the largest apiaries in the country where he lives, and has made a life study of the subject. He is also lecturer, under the Technical Education Scheme, to several County Councils in England. He will treat the subject in a

Series of Nine Illustrated Articles:

1. General and Introductory.
2. Bees.
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This is a series of practical articles that bee-keepers of the United States will not want to miss reading. They will appear only in the AMERICAN BEE JOURNAL.

We want our present readers to begin at once to get their neighbor bee-keepers to subscribe for the Bee Journal for the last six months of 1898, and thus read the articles by Mr. White. In order that all may be able to take advantage of this rare opportunity to learn from a successful and practical English authority on bee-keeping, we will send the American Bee Journal for

The balance of 1898 for only 40 cents—
To a NEW Subscriber—thus making it

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7 Capons and Caponizing—Field
8 Kendall's Horse-Book
9 Mullen's Horse-Book
10 Foul Brood—by Dr. Howard
11 Silo and Silage—by Prof. Cook
12 Foul Brood Treatment—by Prof. Cheshire
13 Foul Brood—by A. R. Kohnke
14 Muth's Practical Hints to Bee-Keepers
15 15 "Honey as Food" Pamphlets
16 Rural Life

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5 40 "Honey as Food" Pamphlets
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7 Hutchinson's "Advanced Bee-Culture
8 Dr Brown's "Bee-Keeping for Beginners"
9 Bienen-Kultur—German
10 Bees and Honey—160 pages—by Newman
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All New Subscriptions Begin July 1.

Please remember that all the above premiums are offered **only** to those who are now subscribers, and who will send in new ones. A new subscriber at 40 cents cannot also claim a premium.

Now, let every one go to work, and help roll up the largest list of subscribers the old American Bee Journal ever had. It can easily be done if ALL who possibly can get a few new subscribers will kindly do so.

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To all Men, we are prepared to fill orders promptly for

CHOICE QUEENS of the best strains of
Golden or Leather-Colored Italians....

Tested $1 00; Untested—one. 75c; three, $1.50. After July 1, 50c each. Remit by Express Money Order. payable at Barnum. Wis. One and two-cent stamps taken. Address,

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Tested Queens. $1.00 each; Untested, 50c. Prompt and satisfactory dealing.
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GENERAL ITEMS

Short Crop of Honey.

The honey crop will be short here this year—not half as much as last. Bees are in good condition, very little swarming this year, as well as little honey. What honey I have taken is very fine, all white clover. We may get some honey in September and October from asters, but it will be dark.

W. S. FEEBACK.
Nicholas Co., Ky., July 26.

Clipping Device—Wired Frames.

The Monette queen-clipping device is a good thing for catching and clipping queens. At times, however, a number of bees are caged with the queen, which often go up the cone before the queen, and delay work somewhat. The wooden stopper could not be pulled out to let those bees out, as the tin strips coming from the tin bottom are fastened to it. I therefore made an improvement on mine. I unwound some of the top of the cone and bent it on two sides at right angles with the cone, forming a T; to these I fastened the strips of tin. In this way the wooden stopper is free to be removed when letting out bees that run up the cone before the queen. If the device is made this way I think it is twice as good.

When wiring frames having somewhat

Southern Home of the Honey-Bee
Will continue to rear none but the **BEST QUEENS.** Untested. 50 cents; Tested, $1.00.
GEO. W. HUFSTEDLER, Prop.,
President of National Queen-Breeders' Union,
24Atf **Beeville, Texas.**
Please mention Bee Journal when writing.

QUEENS Italian stock. Untested. 70c each; 3 for $2.00 After July 1. 50 cents each; tested. $1.00 each. **Root's Goods at Root's Prices.** Prompt shipment and satisfaction guaranteed. Catalog free
THEODORE BENDER,
20Atf **Canton, Ohio.**
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—BEE-BOOK
That covers the whole Apicultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his
Bee-Keeper's Guide.
Liberal Discounts to the Trade.
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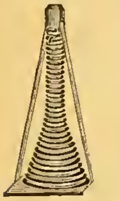
Nickel Plate Excursion to Boston.

Tickets on sale for trains leaving Chicago Sept. 16 to 18, inclusive, at rate of $19.00 for the round-trip, and good returning until Sept. 30. Also cheap rates to all points East. Vestibuled sleeping-cars to Boston, and solid train to New York. Rates lower than via other lines. For further information call on or address, J. Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone Main 3389. (60-32-6)

DR. PEIRO,

CENTRAL MUSIC HALL, CHICAGO.

Please mention Bee Journal when writing.



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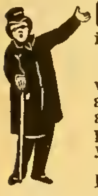
The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.



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with dovetailed body and supers, and a full line of other Supplies, and we are selling them CHEAP. A postal sent for a price-list may save you $$$$

R. H. SCHMIDT & CO.,
Box 187 SHEBOYGAN, WIS.

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If you want the BEST... **Honey Extractor**

Get Williams' Automatic Reversible, And You Have It. Address,

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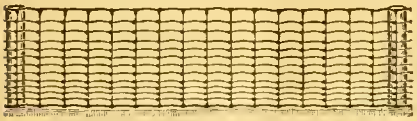

Returned to Spain.

She takes back her vanquished soldiers. We never took back a rod of Page Fence after a siege. They order more instead.

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26E26t Please mention the Bee Journal.

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Golden Italian Queens Cheap!

Two-frame Nucleus, with Queen, $2.25. If you want **BEES FOR BUSINESS**, send for my Catalog of prices. . . . .
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By Return Mail.
Queens.

Strictly 5-band or Golden Beauties. Untested, 50 cents. Tested, $1.00.
25A8t TERRAL BROS., Lampasas, Texas.

Please mention Bee Journal when writing.

soft end-bars, the wire will cut the wood. I have never tried putting in hooks around which to stretch the wire, as I don't like them. I prevent such cutting by driving a ¾-inch brad into the end-bar from the side, either just above or below the hole, according to which side the wire will cut. This practically prevents all unnecessary cutting.

A small staple or a large-headed tack driven on the outside of the end-bar where the wire will cut, will also prevent cutting the wood; but I like the first plan the best. F. ADELBERT.

Flathead Co., Mont.

Honey Crop a Failure.

The honey crop is a failure in this part of Missouri; the severe drouth of last season killed the clover. We look for a big crop next year, as the rains have caused the clover to spring up everywhere—I never saw so much. I could not very well do without the American Bee Journal. W. N. KING.

Greene Co., Mo., July 25.

Very Light Crop of Honey.

The honey crop is very light in this part of the country. I have only ⅔ of a crop as yet, and the prospects are poor at present, on account of no rain. If we don't get rain soon we will have no fall flow. N. RICHARDSON.

Steele Co., Minn., July 26.

Bee-Keepers in Hard Luck.

I have been all over Onondaga County and several other counties, and the bee-keepers are in hard luck—no honey is the cry. Last year was about half a crop. Basswood failed, and very little sweet clover in some localities, makes bad luck. Where sweet clover is plentiful they have a pretty good crop. These people can get good prices if they try, as there have been two short crops in succession. There are lots of bee-keepers who never take a bee-paper. This part of the county is overstockt with bees; some of the apiaries will be empty of bees next spring. My bees are in good condition and gathered some surplus—good bee-paper and good queens, you see. J. MUNROE QUICK.

Onondaga Co., N. Y., July 26.

Season Disappointing.

The season here has been very disappointing. There was an abundance of clover bloom, but the weather was too unsteady and too cool. The basswood was very late in blooming, and as there was the promise of a great bloom, we had big hopes of large returns from that source, but on the night of July 10 there was a heavy frost, causing ice to form on water as thick as glass. The basswood was just then beginning to open, but the bees workt only a few days on it, and quit it when it was in full bloom, so that we got but very light returns from that source. Whether the failure was caused by the frost, or the severe drought that followed, it is hard to determine.

My yield per colony, spring count, will not reach 75 pounds, but the honey is much thicker than it was last year.

Swarming was not excessive, but the bees were very cross, and no work could be done in the yard without a veil, and my man refused to work without gloves. I put on a quantity of sections at the commencement of the basswood season,

Sweet Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Sweet Clover (white).	.60	$1.00	$2.25	$4.00
Alsike Clover........	.70	1.25	3.00	5.75
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Crimson Clover........	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, wanted by freight.

Your orders are solicited.

GEORGE W. YORK & CO.,
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Queens, Bees and Bee-Keepers' Supplies

Tested Queens in April and May, $1.00. Untested, 75c. Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

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SEE THAT WINK!

Bee-Supplies! ROOT'S GOODS at Root's Prices.

Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Cat. free. **Walter S. Pouder,**
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Practical Hints" will be mailed for 10c. in stamps. Apply to—

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Meeting of Sovereign Grand Lodge, I.O.O.F., Boston, Mass., Sept. 19 to 24, Inclusive.

For this occasion the Nickel Plate Road will sell tickets at rate of one fare for the round-trip. Tickets on sale Sept. 16 to 18, inclusive, good returning until Sept. 30, inclusive. For particulars, address J. Y. Calahan, General Agent, 111 Adams Street, Chicago, Ill. Telephone Main 3389. (59-32-6)

and now have hundreds of them partly filled, or just begun, and I am about disgusted with that feature of the business.

To prevent after-swarming, I cut out the queen-cells 8 days after the swarm issued, and now find the majority of these colonies queenless.

The demand for honey here is very limited, and is difficult of sale at 8 cents for extracted and 12½ cents for comb.

A. BOOMER.

Ontario, Canada, Aug. 1.

Leveling Unfinisht Sections, Etc.

Will you allow me to help Dr. Miller to answer "Iowa," on page 454? "What should be done when the melter forms a cap over the comb?" I answer, make it hotter, so it will melt the comb on touching it, then lift it up quickly.

Also "Arkansas," on page 422. To his first question, it seems to me that Dr. Miller doesn't "catch on." I was in the same trouble, provided I am right. Cut strips of sections ⅜ of an inch wide—tack them on the side of the super where the sections meet; tack them on to stay, which will give more bee-space.

J. H. STEPHENS.

Fremont Co., Iowa.

Basswood and Sweet Clover Yield.

Our yield from basswood and sweet clover has been quite heavy, in fact somewhat beyond expectations. Sweet clover is still yielding, but the honey is colored quite dark with wild verbena (V. stricta), so much so as to render it unfit for sale. The sweet clover taste has been killed in it, leaving only a heavy, dead, sweet taste.

Fall flowers are blooming quite plentifully, even though it is early in the season.

I have had but two swarms this season, and feel confident the reason is because I gave every colony plenty of room and kept the hives well ventilated.

I sold all of my honey to the Douglas County and State Exhibits in connection with the Trans-Mississippi and International Exposition.

LEWIS R. LIGHTON.

Florence Co., Neb., July 26.

Report for 1897.

Last year I had 8 colonies, and got something over 400 pounds of comb honey. I had 100 pounds from my best colony. This year I have 10 colonies, and they are working in the supers.

W. H. DUNLAP.

Crawford Co., Ark., July 25.

Bees Doing Little—Swarming.

I have eight colonies of bees which were wintered on the summer stands. They came through the winter all right. Bees are doing but very little here this summer. During fruit-bloom it was too wet and cold; then after the white clover came it turned so dry and hot that the clover all burned out. There was not very much basswood bloom. There was a week or ten days during which the bees did not do anything but loaf. The last few days since the rains began to come they have been bringing in some pollen during the forepart of the day.

On page 3, G. M. Doolittle says: "If more swarms are allowed, they come forth two days after, or from the 8th to the 9th day after the first, and never later than the 16th." Now, I do not know whether I understand him or not, but I will give my experience with one colony last year. In the early part of June, 1897, a colony sent out a swarm, and on the 16th day afterwards they sent out a second swarm, which returned to the parent colony without clustering. Then on the morning of the 17th they came out again, clustered, were hived, and went to work all right. And then on the 18th day after the first swarm, there came off a third swarm from the same colony from which the first and second swarms came. That is, the third swarm came off on the 18th after the first swarm.

A. J. JOHNSON.

Logan Co., Ohio, July 26.

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If you want Colorado Alfalfa, Sweet Clover and Cleome honey—comb or extracted—correspond with

The Colorado State Association.

Our Honey ranks high in quality. Cars lots a specialty.

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Best Basswood Honey in Barrels ❋❋❋❋

We have a limited number of barrels of **very best Basswood** Extracted Honey, weighing NET about 280 lbs. which we are offering at 7 cents per lb. f. o. b. Chicago. Do you want a barrel or so of it? If so, address, with the cash,

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BEES, HONEY, MONEY

Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

J. P. H. BROWN, Augusta, Ga.

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J. M. Jenkins, Wetumpka, Ala.

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For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 25 cents per pound, CASH. No commission. Now if you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

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CHICAGO, ILLS.

Excursion to Boston.

The Nickel Plate Road will sell excursion tickets from Chicago to Boston and return for trains of Sept. 16, 17 and 18, at rate of $19.00 for the round trip. Tickets will be valid returning until Sept. 30, inclusive. On account of heavy travel at this particular time, those desiring sleeping-car accommodations should apply early to J. Y. Calahan, General Agent, 111 Adams St., Chicago. Telephone Main 3389. (58-32-6)

Poor Season—Brown Honey.

There is no honey here this season—the poorest season in my experience. I have had only 34 one-pound sections of honey from 24 colonies. I had no trouble to get them in the supers. There was no honey to be had, and what they did gather was very poor quality—the comb and honey being very brown. I hope next season will be better. Honey like what I have this year will hurt one's trade.

C. C. YOST.

Berks Co., Pa., July 25.

Scheme for Ventilating Hives.

We see a good deal now in the bee-papers about ventilation. There are a great many people who use blocks of wood under each corner of the hive. That is all very well in a strong flow, but if it slacks up suddenly, what about robber-bees?

Now, we give permanent ventilation, and have no fear of robbers. It is not our idea, but that of Mr. Digby Roberts, of this State, and he told us we could make use of it, and also give it to the rest of the fraternity.

We take two pieces of drest white pine 14x1⅛x1, and at each end of the 2 pieces cut down on each side to ½ inch by 1 by 1½; also in one bore one-inch holes about 1½ inches from each shoulder, and cut out the part between.

Now, take four pieces of drest white pine, 20x1⅛x¼, and nail on to the other pieces at the shoulder so as to make an oblong frame. Cover the open sides and rear end with wire gauze, inside and outside, and if you have made it right you will have lots of ventilation on two sides and the rear of the hive, while the entrance is just exactly the same as it was before.

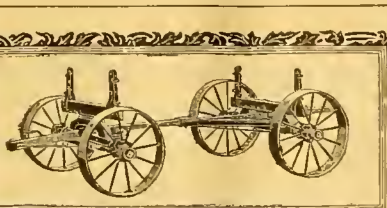
We found that gauze just on the outside was no protection against robbers, as they would get inside and then pass the honey through the gauze to their chums outside.

Bees here have only been making a living, up to within the last week, as mesquite was an utter failure, but now as cotton has started to open, they are beginning to put white frills on top of the brood-nest.

ALDER BROS.

Callahan Co., Tex., July 15.

[We took the foregoing letter to Dr. Miller when we went to visit him, and askt him what he thought of that plan of ventilating hives? He said he preferred a one-inch block at each corner of the hive, as he had, perhaps, 100 hives so ventilated at the time we were there. And there wasn't a bit of robbing going



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If any man needs a reliable wagon more than another it is the farmer. He does not use a wagon every day, but when he does use it he wants its use badly. At such times it is a great misfortune to have a tire come off, a hub split, a felloe break and the wheel "go to spokes"—a general break down. The disuse of a wagon for a few days may mean the loss of a crop. **THE REMEDY?** **Buy a wagon that won't break down.** The wheel is the vital part of a wagon.

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with its **broad faced, stagger spoke, low, steel wheels** is clearly the safe thing for the farmer to buy. It is low and easy to load—no high lift. Will stand any load you wish to haul. Don't cut in or rut in the fields or on the road—runs easy. **ELECTRIC LOW STEEL WHEELS** make the old wagon new. Fit any skien. Stand anything and last indefinitely. Get our **FREE BOOK**, **"Farm Savings"** and read all about them and other things of interest.

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8.	Rural Life	25c
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10.	Foul Brood, by Kohnke	10c
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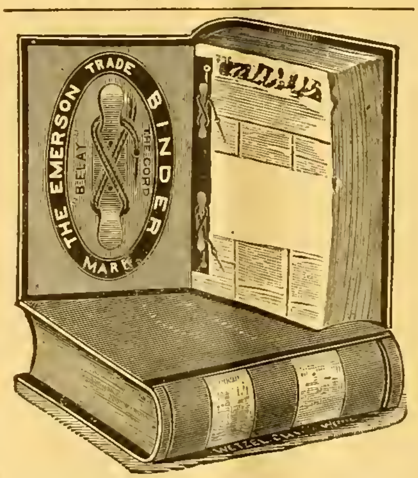

This Emerson stiff-cloth-board Binder for the American Bee Journal we mail for 60 cents; or will send it with the Journal for one year—both together for $1.00 It is a fine thing to preserve the copies of the Bee Journal as fast as they are received. If you have the "Emerson," no further binding is necessary.

GEORGE W. YORK & CO.,
118 Michigan Street, - CHICAGO, ILL.

on at any of the hives so elevated, notwithstanding there was a great honey-dearth existing at the time, and not a super on the hives.

The idea of robber-bees getting inside and "handing out" honey to their "pals" through the single wire-cloth didn't strike the Doctor as being anything very serious, for if the robbers were allowed to pass into the hives, they certainly would get out again with their loads, especially as the plan of ventilation as proposed by Alder Brothers does not contemplate much reduction of the ordinary hive-entrance.—EDITOR.]

Bees Doing Well.

Bees are doing well in this locality, especially those that did not swarm. But the new swarms are very slow, as I have 10 or 12 that are not up in the supers as yet. H. S. HUBBARD.

Arapahoe Co., Colo., July 30.

Another Hive-Tool.

I see a tool is called for that will beat the screw-driver in prying off hive-covers, supers, etc. I will send you one of the kind that I have used for years. It is made of steel. A blacksmith can make one for 10 cents, except the handle. If you have use for it, keep it. If not, pass it on to Dr. C. C. Miller.

Olmsted Co., Minn. N. STAPLE.

[Thank you, Mr. Staple. The sample tool came all right, and we took it along out to Dr. Miller's to give it a good trial, which was done. It works very well, tho in some respects *we* prefer an ordinary screw-driver.

Mr. Staple's tool is about ¾-inch wide and 4 inches long, with a wooden handle. About an inch from the end it is bent to an angle of perhaps 45 degrees. The end is then made quite sharp and tapered back to the bend. It is a handy tool. But Dr. Miller thinks the ideal tool will have one end made for loosening frames, and the other end for prying up the hive, supers, etc.—EDITOR.]

Short Crop of Honey.

Bees have not done much in this part of the country. There was white clover in abundance, but it did not seem to yield much nectar. They did pretty well while the basswood was in bloom, but that did not last long. I have taken off only about 400 pounds of comb honey from about 30 colonies. Unless the fall season turns out pretty good there will not be honey enough to supply the home market. SAMUEL FLORY.

Keokuk Co., Iowa, July 30.

Don't Forget

the excursion to Boston over the Nickel Plate Road, Sept. 16 to 18, inclusive, at rate of $19.00 for the round trip. Good returning until Sept. 30, 1898, inclusive. Tel. Main 3389. (61-32-6)

Illinois.—The annual meeting of Northern Illinois Bee-Keepers' Association, will be held, at the Court House, in Freeport, Ill., Tuesday and Wednesday, August 16 and 17, 1898. All interested in bees are invited to attend.

B. KENNEDY, Sec., New Milford, Ill.

Page & Lyon Mfg. Co. New London, Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

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We also manufacture TANKS of either wood or galvanized steel, all sizes, any form, and for all purposes. Price-list Free. Address,

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Mr. Abbott sells our Hives and Sections at factory prices.

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Ho, for Omaha!

As we have many customers in the Northwest, and believing they will appreciate the low freight rates obtained by purchasing goods from a railroad center nearer to them than we are, getting a direct through-freight rate, thus cutting the freight in half, we have establisht a branch house at 1730 South 13th St., Omaha, Neb., where we will keep a complete line of all Apiarian Supplies, the same as we do at Higginsville, Mo. With the quality of our goods, we believe most bee-keepers in the West are already acquainted, but to those who are not, we will say that our goods are par excellent. Polisht, snowy-white Sections, beautiful straw-colored transparent Foundation, improved Smokers and Honey Extractors, and all other first-class goods, are what we sell. Kind and courteous treatment and honorable dealing our motto. On these bases, we solicit an order, feeling sure that if we sell you one bill of goods you will be our customer in the future.

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Each, $1.00. A practically non-swarming and non-stinging strain of golden bees. "How to Prevent Honey Candying" given to each customer. Tested Queens, each 75 cents.

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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, July 20.—Not any of the new crop of comb honey on the market this week; what little has come sold at 11@12c. Extracted brings 5@7c for the white, according to quality; ambers, 5@6c. Southern, fair to good grades, 4@5c. Beeswax, 27c.

Market is in good shape for disposing of honey of all kinds. R. A. BURNETT & CO.

Kansas City, July 9.—New comb, No. 1, white, 11@12c; amber, 10@11c. Extracted, white, 5@5½c; amber, 4@4½c. Beeswax, 22 to 25c.

Old stock of honey all cleaned up. Few shipments of new in market.

C. C. CLEMONS & CO.

New York, July 30.—There is some little new Southern comb honey on the market, mostly irregular quality and selling at from 9 to 11c. Extracted of all kinds is in good demand. Common grade Southern, 50 to 52c per gallon; good, 55 to 57c.; choice, 5 to 5½c. per pound; some exceptionally fine lots sell at 6c. Beeswax is very quiet at 26 to 27c.

HILDRETH BROS. & SEGELKEN.

Boston, July 9.—Fancy white in cartons, 13c.; A No. 1 white in glass-front cases, 11 to 12c.; No. 1, 10 to 11c; No. 2, 8 to 9c. Extracted, white, 6 to 7c; light amber, 5 to 6c. Beeswax, pure, in good demand with very light supply, 30c.

At the present time the demand for both comb and extracted honey is very light with but little stock on hand.

BLAKE, SCOTT & LEE.

San Francisco, July 20.—White comb, 8½ to 10c; amber, 6½ to 7½c. Extracted, white, 5½@6c.; light amber, 4¾ to 5¼c. Beeswax, 23@25c

The ship Roanoke, clearing from this port for New York on the 16th inst., carried 179 cases of extracted honey of 1897 crop. There is some new crop honey on the market, both comb and extracted, but no large quantity of either. New comb of fairly choice quality is offering in 1-pound sections, and in a small jobbing way at 10c. per pound. Quotable values for extracted show no change.

Detroit, July 21—Fancy white, 11@12c; No. 1, white, 10@11c. Extracted, white, 5@6c; dark, 4@5c. Beeswax, 25@26c.

New honey is arriving, but prices are hardly establisht. M. H. HUNT.

Minneapolis, July 26.—Fancy white clover comb is now selling at 11@12c.; amber, 10½c. Extracted fancy white clover, 5½c.; amber, 4¾@5c. Dark grades, both comb and extracted, not wanted at low prices.

S. H. HALL & CO.

Indianapolis, July 18.—Fancy white comb honey, 12@12½c; No 1, 10@11c. Extracted, white, 6@7c. Beeswax, 25@27c.

Only a few arrivals of fancy white comb; market almost bare, and demand good. Quite a little comb honey from honey-dew is being offered, but there is simply no demand for the stuff. WALTER S. POUDER.

Milwaukee, July 14.—Fancy 1-pound sections, 11@12c; A No. 1, 10@11 cents; No. 1 8@10c; amber, 7@7½c; dark and old, 6@7c. Extracted, in barrels, kegs or pails, white, 6@6½c; dark and amber, 4@5c. Beeswax, 26@28c.

Since our last the sales of honey have not been large, altho a fair demand has existed and continues, altho the fruit consumption makes some difference with eaters of honey. There is not a very large supply of old stock left, and we shall be in good order for new crop both extracted and comb. The outlook is good, A. V. BISHOP & CO.

Buffalo, July 9.—There is a very good demand for strictly fancy 1-pound comb, at 10 to 11c.; other grades, however, range from 9 to 7c., and even 6c. when poor enough. Quite an amount of honey can be sold at this range. Extracted ranges from 4 to 6c., with a moderate demand. BATTERSON & CO.

St. Louis, July 9.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

WESTCOTT COM. CO.

Cleveland, Aug. 3.—Fancy white, 13@14c; No. 1, white, 12@12½c; light amber, 11c; buckwheat, 9c. Extracted, white, 7c.; light amber, 6c.

The demand for honey is exceptionally good, owing to the crop in this vicinity being very light. A. B. WILLIAMS & CO.

Talk about
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WE can now furnish the very best that can be made from pure wax. **Our New Process of Milling** enables us to surpass the previous efforts of ourselves and others in the manufacture of Comb Foundation.

It is always Pure and Sweet.
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Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**
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One Colony of Italians on 9 Gallup frames, in light shipping-box	$6 00
Five Colonies.....	25 00
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6 " queens	5 50
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Extra Selected for breeding, THE VERY BEST..	5 00

About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

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Circular free, giving full particulars regarding the Bees and each class of Queens.

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Because it has always given better satisfaction than any other.
Because **IN 21 YEARS** there have not been any complaints, but thousands of compliments.

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38th Year. CHICAGO, ILL., AUGUST 18, 1898. No. 33.

CONTRIBUTED ARTICLES

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PROFITABLE BEE-KEEPING,

WITH

HINTS TO BEGINNERS,

BY

C. N. WHITE, OF ENGLAND.

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

No. 7.—SUPERING.

The amount of success that a bee-keeper achieves depends, as has already been stated, upon surrounding circumstances, such as nearness of honey-producing crops to the apiary, and the state of the weather during the time they are in bloom; but with these necessary conditions in his favor, there remains another item without which the fullest advantage possible cannot be obtained; his energies must be directed by thought and applied to the work of the apiary at the right time.

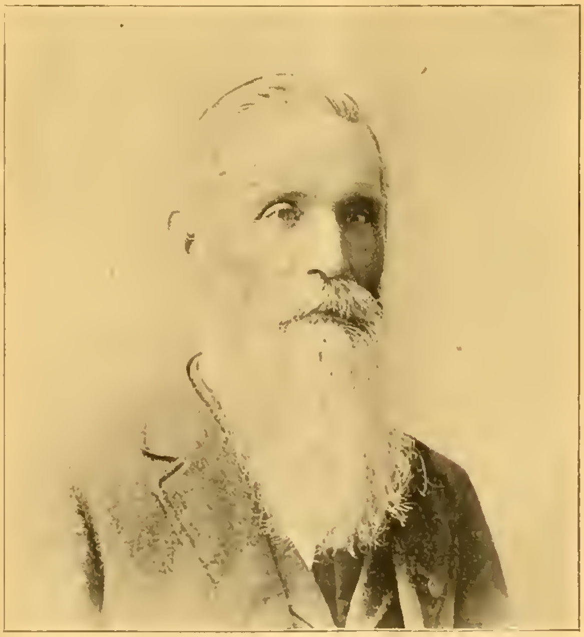
It is utterly useless expecting full supers if bees are left to themselves; it is equally foolish not to give supers when colonies are strong and honey is being gathered rapidly. I have known many cases where, for want of supers, 40 or 50 pounds of honey per hivo have been lost. For instance, in my own apiary I had three swarms as nearly as possible of the same weight, I hived them on the same day in exactly similar hives, and gave exactly the same treatment to all except in one respect. Two were supered a few days after hiving, the other was left entirely alone, the consequence being that while the bees of the two supered lots were working vigorously day after day filling their supers, the bees in the third hive were lounging about the entrance doing nothing simply because they had nowhere to put the honey if they gathered it. This resulted in a positive loss of over 20s., as the other two lots stored honey to more than that value.

It may be askt, "What is supering?" This term, tho sometimes wrongly applied, is understood to mean the giving of bell-glasses, sections, shallow-frames, or, in fact, any receptacle in which the bees may store their honey when they are gathering considerably more than is required for the daily wants of the colony.

Supering really should be applied only to the giving of room for surplus honey above the brood-chamber, as must be the case when the tiering hive is used. This is the style of hive recommended, and the supers used in connection with them may be either Ivo bar supers, shallow-frame, or sectional supers.

The style of super adopted should be determined by the market for honey, and the time that can be spared for the work. Being a busy man I have used some Ivo bar supers on several movable-comb hives for some years past, and I find I can get as much honey, if not more, by using such supers than I can by using either shallow frames or sections, and by spending not a quarter of the time. Sheets of foundation, three inches in depth, are put into the bars, and then the super is ready, but between this or the shallow-frame super and the brood-chamber there should always be placed a sheet of queen-exculding zinc.

When full of honey the super must be cleared of bees by one of the methods given in this article. The combs are attacht to the front and back walls of the hive, and therefore before they can be moved the attachments must be cut by raising each end of the super alternately and running a knife from end to end close to the inside walls. The combs will then hang from the bars, and are removed by raising the latter. The combs are next cut from the bars and allowed to drop into a pan, to be afterwards sliced so that when put into some kind of a strainer or honey cistern the honey may drain away free from any contamination whatever. Before the bars can be used again fresh pieces of foundation must be fitted in them, but this need not be lookt upon as an expense, as the wax produced by melting the sliced combs will more than compensate for the outlay.



Dr. H. Besse—See page 519.

EXTRACTING FROM SHALLOW-FRAME SUPERS.

Extracting honey from the combs is now a very general practice, and one that is to be strongly recommended in working colonies for large returns, for much work is saved the bees, and more honey is obtained seeing that much that would otherwise be used in the production of wax for building the combs, is carried up into the super, thus adding considerably to the surplus.

The 5½-inch shallow-frame super should in all cases be used if the object is extracted honey, for not only is it more convenient in handling, but the bees enter it more readily than they do the larger, and, for extracting purposes rather unwieldy standard-frame super.

On removing the super it should be placed in a warm room, and if the work of extracting can be carried on at once, while the honey is warm, it will be an advantage, as it will flow more freely than if allowed to get cold by standing a day or two in a cold room. The cappings, or cell-covers, should be shaved off with a sharp knife, warmed by standing it in a pitcher of hot water, and if cut from the bottom with a saw-like motion while the top of the frame is held forward, the cappings will remain in a sheet and fall into the pan held below. When the uncapt combs are put into the cages of the extractor, they should be so placed that the bottom-bars go around first, for thus the honey is more easily thrown out as it leaves the cells in the direction of the pitch given to them by the bees when they are building their combs. The dripping combs should be allowed to stand to drain for a few hours; otherwise honey might be dropt about in the apiary and cause robbing.

It is always advisable to return combs wet with honey in the evening so that the excitement they cause may be over by the morning. Returning such combs at unsuitable times, and placing scraps of comb about for the bees to clean, are undoubtedly the cause of much robbing, and, if in a foul-broody district, the spread of the disease.

SECTIONAL SUPERS.

The style of sectional super to be chosen, and the mode of preparation, have already been explained under "Hives," and therefore advice will only now be needed in order that good sectional work may be produced. It is by no means an easy task to obtain really well-filled sections, tho if the sections are properly prepared and placed upon strong colonies or swarms standing near fields of white or Alsike clover, or similarly good honey-producing crop, the bulk of the sections will generally be well finisht.

The great secret of obtaining well filled sections is to crowd the bees. This is done in two ways, either by removing the outer frames from a strong colony and substituting dummies at the commencement of the honey-flow, or by giving a very strong swarm limited room in the brood-chamber when hived. By adopting the former method, the crowding has a tendency to cause swarming, but so long as fine weather continues, and the bees have ample, but not too much, super room, so long will swarming, as a rule, be averted. It is when there comes a change in the weather, compelling the bees to leave the super and further crowd in the brood chamber that swarming is practically certain, unless during the time they are so crowded, work in the form of comb-building is given by substituting empty for full frames in the brood-chamber. To succeed in the production and sale of sections requires much more skill and patience than many bee-keepers are in a position to give; it is therefore advisable that they should adopt either the shallow-frame or the "Ivo" supers.

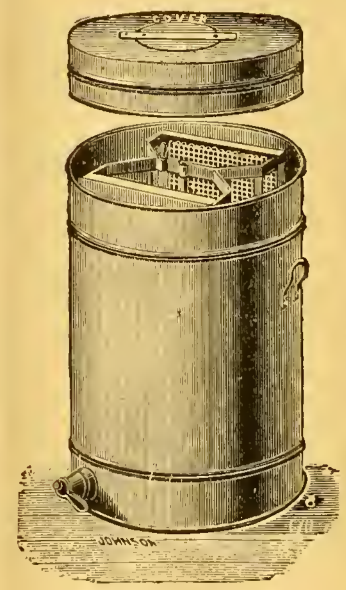
REMOVING SUPERS.

Until very recently the most difficult and not the least dangerous of operations in the apiary was the removal of supers; but with accurately fitting parts, and the avoidance of all incentive to the building of brace-combs, the difficulty is removed, while, by the use of bee-escapes, the bees leave the supers without disturbance.

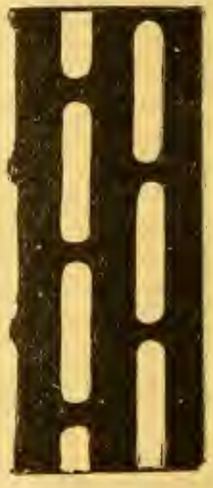
The two super-clearers in most general use are the *cone* and "Porter" escape. The cone is made of finely-perforated zinc: it is 3 inches long, 2 inches wide at the end attacht to the hive, and ¾ inch at the narrow end. It is fastened over a hole in the front of the roof, or fixt on the side of a box to be used for clearing of bees all kinds of supers after removing them from the hives. If the cone is fixt on the roof the super to be moved is gently raised while a cloth or newspaper is placed beneath it to imprison the bees in the super. The quilts are next removed, so that when the bees leave the super, which they will do as soon as they find they are cut off from the brood chamber, they can get into the roof, from which, if bee-proof all around, they can leave only by the cone.

The box clearer must be of a size to allow the super to rest evenly upon it. The straw, box, or other super is then gently raised, lifted across to the box, and placed in the same position upon the top of the box in which a hole 6 or 9 inches in diameter is made. The bees are in this case prevented from leaving the super except by passing down into the box below, and then, being attracted by the light, they pass through the cone fixt over an inch hole in the side. If the supers do not fit evenly upon the top of the box, any holes through which bees can pass should be stopt with rag or paper, otherwise the sweets will be found by bees of other hives, and carried off rapidly, so that in a few hours a grand super may contain nothing but empty combs.

By using the cone escape the bees are compelled to pass through the air on their way back to the brood chamber, and this fact no doubt, inasmuch as it may lead to a disturbance in the apiary, led the inventive mind to seek for a more satisfactory method of emptying supers of bees. The best ever designed is known as the "Porter" escape, named after the inventor, an American bee keeper. It is fixt in the center of a board made the same size as the super. If all supers, therefore, are of the same pattern, one or two boards will be ample for most apiaries. When the super is raised this board is placed beneath it and both are then returned: but in order to prevent the crushing of bees, when replacing the super, the board is fitted with a ⅜ inch ledge running around above. By placing this clearer beneath the super to be removed, the bees are prisoners until they find connection with the brood-chamber. There is then some commotion until a passage through the escape or trap in the center of the board is found. By listening at the side of the super for a few minutes a continual clicking of the fine brass springs which form the trap will be distinctly heard, and it will tell of the stream of bees passing down into brood-chamber or super below.



Honcy-Extractor.


Queen-Excluding Zinc.

This method of clearing supers of bees is strongly recommended because the bees simply pass downwards from the top super or supers leaving the super work there intact. If the clearer has been put into position with care and without jarring the hive, there is no disturbance caused, as the bees do not leave the hive, and the super may be left on the hive a few hours, or longer if desired without the bee-keeper being anxious as to the safety of the contents. This clearer is really indispensable if show sections are being removed, for on the least disturbance of the super crates the bees, according to their natural inclination, commence uncapping the sealed comb. If the sections are thus treated by the bees, they are not only spoilt for the show table, but weep and become sticky and therefore unfit for market.

(Continued next week.)

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The Eucalyptus—Varieties and Value.

BY PROF. A. J. COOK.

The attention of all visitors to California is at once attracted to the numerous groves of eucalyptus which form a most conspicuous feature of our landscape. Their habit of growth, reaching as they do away up to cloud regions, gives them special prominence. As is well known, they are natives of arid Australia, and so are peculiarly well fitted to our own arid clime of Southern California. When I say that there are well toward 200 species of eucalyptus, it need hardly be added that one can find attractive variety for tree-planting and not go beyond this single species. The common blue-gum—eucalyptus globulus—the one so generally seen in California, is very tall and slender, while some of the red-gums, like eucalyptus citriodora and eucalyptus robusta, have a fine spreading habit, and are very graceful in habit and form.

The bloom of all is attractive and beautiful, and the deep crimson blossoms of eucalyptus ficifolia always elicit praise and admiration. While the most common period of bloom is from September to May, there is no month in the year that bloom may not be found in a park of eucalyptus trees, with well selected varieties. The top-shape fruit of all species is interesting, while the peculiar form and habit of bloom of such species as eucalyptus corynocalyx must ever win admiration, and create interest.

The oil of eucalyptus is so peculiar that crusht leaves give a very markt odor, and the air near a grove gives unmistakable evidence of the near proximity of the trees. Eucalyptus essence and oil is used not a little in pharmacy.

Of late I have secured some honey which undoubtedly is eucalyptus. Of course there is no reason to suspect that the peculiar flavor of the juice would be reproduced in the honey. The nectar-glands make or form nectar from elements obtained from the juice, and do not draw it all formed from the juice. I was glad to find that this honey was light in color and delicious of flavor. To be sure, this honey will always be secured in the season when it will be useful for stimulation and food of bees, yet in favorable seasons it may come in such profusion as to be a generous supplement to the season's crop, and it is good to know that in such case no harm will result. Indeed, the common planting of these trees will add another point to California's fame as the great honey-region of the world.

That the range of bloom makes the tree more desirable will appear from the following data of a few species now most in favor:

The common blue-gum, E. globulus, is in bloom from December to February; E. robusta, which is also much in favor, has the same period of bloom. The honey I have came from these species, I think. E. rostrata blooms in April and May; E. citriodora from August to December; the curious-blossomed E. corynocalyx, from June to September; the brilliant ficifolia blooms in August and September.

Mr. Barber, foreman of the Forestry Experiment Station, at Santa Monica, speaks in special praise of the following species for honey, which he says are swarming with bees on all pleasant days while in blossom: E. calophylla, July to October; E. corymbosa, August to December: E. globulus, December to February; E. robusta, December to February; E. polyanthemos, December to April. He also praises the dwarf E. alpina, September to November, which will endure some considerable frost, and has a peculiar habit of growth which will make it more attractive.

The bee-keeper may well rejoice, as the vigor, beauty, fragrance, and long-continued bloom of these trees insure that they will be more and more extensively planted in our State. The last feature makes them of special value to bee-keepers. Abundant nectar-secretion in late summer, fall and winter, makes them of much value for stimulative breeding.

Los Angeles Co., Calif.

No. 3.—The A B C of Marketing Honey.

BY HERMAN F. MOORE.

[Continued from page 500.]

If you leave the town and call at the farm houses, you may think best to reduce your price two or three cents a pound from your town price; but if you do so, by all means double your size of package, or you will be placed, oftentimes, in an embarrassing position, when your town customer meets your farmer patron, and they compare notes on your price-list. It is perfectly legitimate for you to take a smaller price if you can thereby double the sale. This is simply wholesale dealing applied to small transactions.

Let me urge you to put the same price on liquid honey as on comb, when both are of the best quality. Many, many times I have been askt the question, "How does it come that extracted honey can be bought for less than comb honey? I should think it would be worth more?" The thought in their minds is, that if pure it must, and should, bring more, as there is more actual honey in a pound of liquid honey than in a pound of comb, the difference being, of course, the percent of loss in wood and wax. My answer has been, "It is really worth more to eat, and I get about the same price. You see, we can produce more liquid honey from a colony of bees than comb, consequently our profit is greater on the clear than on the comb honey, on account of more scientific and improved methods of caring for our bees."

I contend that there is no good reason why we should accept half the price of comb for honey without comb, if equally good, well ripened and delicious. That the price is less in the wholesale markets in the cities is no answer; we are selling in the retail markets exclusively. We care nothing for the wholesale markets, except as information. The wholesale price of liquid honey has no claim to bind us; our customers would not touch it in those markets. When they buy *our* honey they receive *our guarantee* that the honey is pure and delicious. That of itself is worth money. Liquid honey in the cities goes to families at 20 to 25 cents a pound bottle, and 12 to 15 cents for a half pound. The difference between the so-called wholesale price of liquid honey and these retail prices, make the profits of the commission merchant, the retail grocer, the honey-bottler, the adulterator. In any case, the producer of fine honey—either comb or clear—is rightfully entitled to the profit of these middlemen, when he sells his crop to the consumer.

The most potent factor in all sales of goods is personal acquaintance. Job lots of fancy-colored shirts sell for 59 cents each in the big department stores, and the fancy haberdasher gets two dollars apiece for a shirt that to the uninitiated looks very like, only the latter is made to measure, of the best material, well stitcht, and neatly fashioned.

An old customer and schoolmate of the writer, on his death-bed, being almost unable to take any food, askt for honey. The family sent to the nearest grocery for some, but on finding whence it came, the sick man refused to touch it, saying he wanted some of mine (I had supplied them honey for years). The sick man's sister wrote me at once, 13 miles away, to bring them a pail of honey quick, as her brother was very ill, and wanted it.

Honey has not come down so much in price as it seems to the producer, who markets his crop through the commission merchant and retail grocer. The commission man gets 10 percent, and the shipper pays freight and drayage. The retail grocer gets 40, 50, or 75 percent on his purchase of your fine comb honey; you get 11 to 12 cents a pound, and the consumer pays 18 to 25 cents a pound. I knew of one store that sold gilt-edged Wisconsin honey in one-pound sections for 25 cents a pound, within the past two years.

For a package of comb honey the most successful I find is the 12-pound, two-row case. You can sell this from $1.80 to $2.40 a case, and will find hundreds of families that will take from one to five of them in a year's business. I think we should all aim to get as near 20 cents a pound for our honey as possible. That is low enough for fine, delicious honey, and five cents cheaper than the old-time price when I was a boy.

The no-drip shipping-case is more work, and unnecessary, if you hand your honey directly to consumers.

How best to advertise your honey and yourself to your trade will always be one of the burning questions. You can't avoid a certain amount of advertising of yourself along with your goods. People seem to desire a personal acquaintance with those they patronize, no doubt rightfully concluding that a man of high aims and broad thought is a good man to depend upon for pure food.

To always sell the best goods is the first and most important way to advertise.

By all means limit yourself to 12 pounds to the gallon for extracted honey, never less in weight. Twelve-pound extracted honey will almost run comb out of the market at the same price per pound. Most people buying thin, unripe honey, decide at once that it is half glucose. This, of course, works dead against the man who sells such stuff, and it has usually been the retail grocer who has suffered for a fault that belonged to the producer who rusht the thin stuff to market through the commission merchant.

As to comb honey, too much scraping of the sections is no advantage when selling to your family trade. The fine, delicious flavor is the main thing, and must be secured even at the expense of looks. People are so used to having goods of all kinds look pretty, and then utterly fail on the table, that I have felt as if too great beauty and attractiveness were a disadvantage rather than otherwise. For example: One-pound combs, so pretty that the customer instantly decides "no bee made that." Attract the eye, by all means if you can, but be sure you charm the palate first and foremost.

In starting out to get orders, take a fair sample of your comb (one section) and one of your pails half full of liquid honey. Never try to sell extracted honey alone. People will go for you like this: "You haven't got comb honey?" "You are selling this manufactured honey?" "How much glucose do you use?" etc. The presence of some comb honey shuts their mouths, and gives more tone to your business than you can imagine.

It is surprising how interested people are in the story of how you manage your bees, and a personal knowledge of bees and constant practice in handling them you will find essential to the greatest success in selling honey. Tell them about the three kinds of bees and the three kinds of cells. Take a brood-comb out of a hive, shake off the bees, and take it with you on your next trip. Choose a comb having worker-cells, drone-cells, and, if possible, a queen-cell or two along the edge. People are perfectly fascinated with the explanation of the six-sided construction, the grouping of six cells around each central one, and looking down the corn rows in the rows of cells. A sheet of comb foundation half drawn out is the best for this exhibition.

Have everybody taste your liquid honey, by all means. Many a person will say, "No, I don't care for honey;" and after tasting a few drops of your delicious clover or basswood will buy, "if what you bring is *like that*."

Toothpicks are sometimes used to give a taste of honey. You can't carry a teaspoon along, for people will not like to eat after another. If you are calling at private houses, you can ask each lady to bring a teaspoon, but even then it is best to have a small stick along in case she don't want to bother.

The nicest thing I know of is sold under the name of "cigar lighters." They are pieces of soft wood 4½ inches long, ¼ inch wide, and 1/16 inch thick. They are sold very cheap. Stick one of them one to two inches into the liquid honey, and by rolling it up like a string you can give any one almost a teaspoonful of honey, if you and the other person are dextrous. The lady who won't go after a spoon, will be pleased with your ingenuity, and will taste your honey just for fun, and you have made a sale.

It may be useful to provide some jelly-glasses full of your finest honey, to leave for a free sample with families whose trade you are real anxious to secure, and who are hard to reach. The first order is oftentimes the sticker. The writer has chatted with certain people as long as three years before getting their first order, and after that permanent customers.

In advertising your business, remember you are in this for the remainder of your life, and nothing but a straightforward course will avail.

Always provide yourself with a certain amount of printed matter, so that you can leave your address with every person you ask for trade. Cards and circulars are both rather necessary in this day of advertising. In writing your circular, give your location, average number of colonies kept; largest crop produced in one year, and names of flowers your bees pasture upon. Write a clause about candied honey, and the method of making it liquid again. Give a short history of yourself or family as bee-keepers, and a few things that would be of interest to the general public about bee-keeping. A cut of a honey-extractor is always a curiosity to the non-bee-keeping public. Cuts of queen-bee, drone, worker, bee-hive, etc., can often be used to advantage. A pictorial circular will be more likely read than any other kind. Somewhere in your circular say, "We sell only pure honey to every one." Come out as flatfooted and decided as possible. You will find that people will believe you, for adulterators do not usually use such terms.

Every package of honey sold must have a label, giving your name and address. A rubber stamp to put the same on every comb of honey sold is also a good plan. You will even find that a copy of Gray's Botany is a valuable ally in selling honey. In the front of my order book I have written a list of the 30 or so different kinds of clover. Look up and name the different kinds of clover in your county and adjoining counties, and be able to talk intelligently upon them. Nowadays botany is taught and studied in nearly all our good schools, and this may be a valuable means of interesting young and old.

Write for your local paper bee and honey notes, under your own proper name and address. This may be a most valuable means of acquainting the people with your name and business. No great amount of originality will be required. If you take the three or four best bee-papers you can almost clip enough matter to fill your column once a week.

But, after all is said and done, nothing in the way of advertising is so good as personal conversation with prospective customers; and if both you and your goods are "*all wool* and *a yard wide*," they will soon satisfy themselves of that fact, and your golden reward will follow.

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☞ See "Bee-Keeper's Guide" offer on page 527.

Plain Sections and Fence Separator.

BY S. A. DEACON.

I see it stated (page 726, 1897) that Mr. Root, Sr., "claims no new feature" for the plain box-like section and cleated separator combination, but we are told that his firm has "just awaked to the proper appreciation of the combination." This is a rather humiliating confession, and certainly very slow-moving on the part of the leaders of our industry! for, as stated in my last contribution to your columns, the said combination is nothing new in this out-of-the-way semi-civilized corner of the world. Mr. Root's admission hardly justifies Mr. C. P. Dadant's assertion, or, at least, implication, that you United Staters are about the smartest and most practical men on the face of the earth! It strikes me there are imitators of Old Rip at Medina, as well as in Decatur Co., Iowa.

In my opinion a perfect 7-to-the-foot section, to be used with the cleated and slotted separator, is made by reducing two-inch sections, having four scallops, to 1 11/16; *i. e.*, 7-to-the-foot width. This does not do away *entirely* with the scallops, but leaves just so much of them as to afford a full bee-way on all four sides when two sections are placed together, giving the bees ample access from all sides; this is how I and others here have used them, with a separator 'twixt every two rows. Of course this does not give us a section having, as Mr. Root says, "four plain sides of equal width throughout," but very nearly so; and the slight scallop left gives the section a far more pleasing appearance, I think, than the severe, inartistic "dry-goods-box arrangement," as one of your contributors terms the pattern so greatly admired by Mr. Root, and which, it must be borne in mind, necessitates a separator (⅜ inch thick, including the cleats) for each row of sections, instead of between every two rows (as used by its originator, the late Mr. B. Taylor).

This will necessarily reduce the capacity of the dovetailed 8-frame hive super from 24 to 20 sections. Of course the sides of the Root super can be made of ½-inch stuff, a change greatly to be desired; for, as I mentioned in a former communication, the present dovetailed supers are quite unnecessarily lumbersome and heavy. Even then the cleated separators will have to be made, not of ⅛-inch stuff, but, as I make them, of sawn wood separators, the slots being cut with a ¼-inch chisel. Then, with the sides made of ½-inch stuff, 24 sections 7-to-the-foot, and 7 cleated separators may be got comfortably in; tho, by rights, the two outside separators, should have ¼-inch cleats on their outer sides, and be puncht chock-full of holes, *a la* Pettit.

I make my super sides of 7/16-inch stuff, and I reckon that's good enough for anything; and if the senior Root's awakening to the advantage of using narrow sections and cleated separators will prove the death-knell of the clumsy, unnecessarily heavy dovetailed super, he will not have opened his blinkers by any means in vain. South Africa.

[We think Mr. Deacon does not know that 24 of the plain 4¼x4¼x1½ sections (the same as with 1⅞ sections and plain separators) are used in the regular 8-frame ⅞-inch super with the fences or cleated separators, and not 20, as he says.—EDITOR.]

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Selling Comb Honey to the Grocery Trade.

BY G. K. HUBBARD.

[Continued from page 502.]

At your next call you find a man who hardly ever keeps any honey unless he gets a little occasionally from a customer.

"The times are too hard. It won't sell."

"But sometimes people buy honey because times *are* hard."

"How so?"

"I see you have some high-priced preserves and jams on your shelves here. The trade that has been getting such goods is apt to buy 15 cents' worth of honey just because it does not feel flush enough to buy something more expensive. Or, instead of going home without candy or something that the children want and expect, a man will take home a few sections of honey and tell the children that these hard times they will have to get their sweetmeats at the table with their meals. In such cases you would sell the honey, if you had it, when you would not sell either the expensive preserves or confectionery. You are not paying store rent, and putting in your time for amusement, but you are here to sell goods; and if the people do not find what they want here they will buy elsewhere."

"I don't think my trade would pay the price for the fancy honey, and I do not like the cheaper grade."

Removing the contrast by turning the fancy case so that the honey in it cannot be seen, you reply, "This is a better grade of honey than you think. The only possible objection to it is that of color. It is just as pure and healthful, is well filled, and is in every way as good an article as the bees can make from the flowers it was gathered from. You would be surprised at the ease with which you can sell this grade of honey by mentioning its purity and flavor if any one remarks about its color. I have only three cases of this dark grade left, and I can't see how you would regret it if you would let me bring in the lot."

"I could not use three cases of it, but I believe I will try one case and see how it goes."

At your next call where you find any prospect of a sale the proprietor says, "Yes, that is fine looking honey; but I have had it here as nice, or nicer; and when I took it home to eat I found so much filler in it that it was tough inside."

"You mean the comb foundation used in the middle, I suppose. Yes, I know some bee-keepers are very careless about this. They use an inferior grade of home-made foundation which cannot be detected until the honey is cut, and it is bound to give anything but satisfaction. We all use some foundation in order to get the combs built straight in the sections; but I am very careful to use only the best article that can be made. The foundation I use runs 12 square feet to the pound, is the purest and best to be had, and is actually thinner than much naturally-built comb. In all the little points in honey-production I try to keep posted, and put out as fine an article for its grade as any bee-keeper I know. If I sell you the four cases I have left, and you do not find them to be strictly all right I will take them off your hands and refund the money the first time I am over; or if you write me a line I will come promptly and get them. I am not here to-day merely to sell what honey is now needed, but to build up a trade and make an outlet for my large crop this season, and probably for other seasons."

"We always sell our honey by the frame, and we sometimes get it that is every weight and thickness, which results in a lot of culling over, and then having to sell the last few frames at a discount, may be below cost. I see this case is pretty much all one thing, but you have irregular or partly filled frames sometimes, don't you?"

"Yes, sir; but when you buy regular-grade honey of me, that is exactly what you get. I dispose of extra thick and thin combs at some boarding-houses near home. The honey I put on the general market is cased up with the wishes of the grocer in view. Well capt sections that will not weigh 12 ounces are cased by themselves and sold together. There are some grocers who prefer these light-weight sections because they cost less, and they prefer to sell something that goes at a small price. By having the honey in a case somewhat uniform in weight it saves the picking over that is apt to happen when there is a great difference in either color or weight in the sections in a given case."

"But I wouldn't want to buy four cases. You would sell me one of your best grade, wouldn't you?"

"Yes; but surely one case of honey is a small matter for a man with the trade you appear to have. I should like to sell you enough to last until I come over again. Better take one case of each grade, at least."

"My trade does not go much on a poor article."

"But my dark honey is not a poor article; in fact, many bee-keepers who are not so careful with their honey would call this their best. It is a good idea to let a customer have his choice in such matters, and then you will not have people saying they can buy for a cent or two less elsewhere. It is easy for them to be deceived in quality while remembering the price. To illustrate, you probably have a great variety in price in the same kind of canned goods, and your customers make their selection. Why not give them the same chance on honey?"

He objects to the price, and wants a liberal discount if he takes two cases; but you emphasize the rebate on the cases if in good condition; tell him the last section in a case will sell as readily as the others, and that you warrant satisfaction.

You get your money, and go back to your wagon with two cases yet to dispose of. You have been to all the groceries, and are not sold out. Now you try the bakeries.

"I see you do not have any honey on sale here, yet some of the bakeries over our way sell more than some of the groceries."

"We never have any call for it."

You smile, and say, "Yet that does not prove you could not sell it. You do not have call for strawberries at this time of the year, either; but they would surely sell if you had them in sight. Probably half the comb honey that is sold is carried home because the customers are in the store on other business, and, seeing the honey, take a fancy to it and buy it. If you had this case of honey on the shelf back of you, right here in plain sight, it would not be long before some customer, taking home some fresh bread or rolls, would want to take along a section or two of honey also."

"But we buy some strained honey for use in our baking, and we have some Mason jars of it on the shelf up there, you see, and it does not pay for the bother of fussing with it, for we hardly ever sell any."

"Well, I'm not much surprised, because it is not labeled, and people do not know what it is. When you strain your honey the 'poetry' is all taken out of it, as a lawyer friend of mine says. Comb honey is always attractive, will sell itself, and if other bakers do well with it, I don't see how you would miss it. You can make 25 percent on it, and whatever you make will be just that much extra to help pay rent and keep business on the move. You can rest assured that if you had these two cases here in sight the people would buy it. Besides it is attractive, and helps give your place a neat and filled-up appearance."

"If you want to leave one case here and let me try it I will pay you for it if it sells, and if not you can get it again some time."

"I thank you for the offer, but I can't accept it. If I should do business that way I should have to raise my prices to cover an occasional loss from failure or fire, or something else. My prices are as low as they can be for a good article, and I have to sell for cash."

"Another sale made; but the other bakeries do not care to take the remaining case, and so you go to the hustling young fellow who runs a fruit and confectionery store in a little 7x9 room under a stairway a few feet from the leading business corner of the place."

"You occasionally have quite a loss by your fruit spoiling on your hands. Here is an article that will make you a good percentage, and will last for years, so far as its keeping qualities is concerned. The investment is absolutely a safe one because it is sure to sell, even if it does not go off with a rush."

He likes the idea first rate, and your purse is heavier and your wagon empty.

Now, do you think I have made this appear too easy? Not a bit of it, unless the market is actually glutted with an enormous crop. In that case my advice would be, that if you cannot make sales after trying various places within your reach, wait a few months and try it over. You would better borrow money and hold your crop than to sacrifice it. I am sure, however, that some earnest work along this line will give you good results under almost any circumstances that you are apt to find, for conditions vary greatly in towns within a few miles of each other. I know of two cities nine miles apart where the retail price of honey has been different by 25 to 40 percent. You will find a good many things that are new to you if you will do some exploring along this line.

If you are fortunate enough to have a crop of honey that averages very high, you will be surprised to see how easy it is to interest people; but your lower grades should be pusht along in proportion to what you have. You do not want a lot of low-grade honey on hand, with the best all gone. The price-mark is the safety valve. You can sell anything if the price is right; but have your price high enough so you will have to talk it up to sell it.

One party said to me, "Your honey gives good satisfaction, and I have made a good profit on it; and any time you are over come in and see how I am stockt."

No wonder he was pleased, for he had sold lots of it, and at prices from 20 to 25 percent higher than I supposed he was getting, and higher than the other grocers in town were getting. He had a large and fancy trade, and was actually clearing 40 to 45 percent on my honey.

Give your customer a square deal on grading, etc., and you will often be pleased to hear such expressions as: "Just set it right on the counter; here is your money. I am too busy to open it and look at it. The other was all right, and I will risk this being the same." "How many have you? Two cases of fancy and three of amber? All right; carry it to the back of the store; I'll take your word for it." "I don't know but your price is a little high; but I like the way you put it up, and it sells as well as any honey I ever bought."

You will soon get acquainted with your trade, and if you do your part you will get a top-notch price, will not hear anything about "trade it out," will not be badgered about cutting prices, and will be treated in a friendly and businesslike way on every trip, with numerous invitations to "call again when you are over."

Once on my first call, as I set a beautiful case of honey with a three-inch glass front on a gentleman's counter, and removed the covering, he read aloud the 14-inch label on the front of the case, "Gathered from Orange Blossoms;" and then as he saw the 28 neat labels printed in red ink, pasted on the sections, with the snow-white honey smiling up at him from between, he slapt his hands together and exclaimed, "By jolly!" I need not tell you he has been my steady customer since, altho he thought my price was high, and I knew it was high enough.

With the finest honey from clover, orange, willow-herb, sage, etc., you need not be doubtful about placing it to advantage in almost any market; and while I know that the majority of readers will not take the pains with their crops that I do, nevertheless if you will take the honey you have, and make a businesslike effort something like the one above, you will find that you can dispose of it, even if that supplied by more expert apiarists does surpass yours in quality. With a first-class article you will find yourself taking too small a load to market oftener than too large.

I do not label all my honey, but I think I shall do more of it in the future. I have observed that it gives the honey a finish, and pleases the customer well enough so that I am pretty safe in counting it to bring 25 cents per case extra.

The labels cost less than three cents, and a boy will stick them for one cent per case. The cost of this is offset by using second-grade sections. I get my finest honey that I expect to label in the cheapest sections. In fact, the only advantage worth mentioning that I know of in using snow-white sections, is in the clean appearance when the cover is removed. The labels do the same; and while I have had scores of merchants take out the sections and examine my labeled honey I never heard one remark that the sections were not the whitest. They look at the honey and not at the frame it is in. There is too much straining after "snow-white," "extra polisht," etc., according to my way of thinking.

There are a good many ideas in the above that may be helpful to those who sell their crops by peddling from house to house; but in such cases the point I would emphasize is to first quote the price per case, or so many sections for a dollar. If there is to be any talk about your selling just a few sections, let the other party start it, or you can make the offer after your first proposition has been refused. You will never sell a case to one party by trying hard to sell 25 cents' worth. Work for large sales, and expect to make them.—Gleanings.

⁂

Do Italian Bees Produce Better Honey?

BY EDWIN BEVINS.

Referring once more to a matter which does not seem worthy of much space in the American Bee Journal, I wish to say to Mr. Hart (see page 451) that I am sorry that he took my little squib on page 322 so seriously. I did not mean to be offensive. As what I said was not an answer, nor intended to be an answer to Mr. Hart's question, it is probable that I ought not to have said anything about it. But unfortunately, perhaps, I did, and now I am willing to take the consequences.

I would like, as well as Mr. Hart, to know why Italian bees store a better quality of honey than other bees when all have access to the sources of supply.

Looking at pages 133 and 134 of the American Bee Journal for the "opinions and statements" that led Mr. Hart to ask the question, I find that Mr. Baxter exprest the opinion, or made the statement, that the quality of the honey stored by the Italians is better than the quality of that stored by blacks or hybrids. He gave no reason for this superiority, but did give a reason for the better appearance of the honey stored by blacks and hybrids.

Dr. Besse thought the reason why Italians store honey of better quality than blacks and hybrids is that the Italians work more industriously on red clover. But that opinion "cuts no figure," as Mr. Hart wanted to know why Italians store a better quality where all have access to the same sources of supply. Dr. Besse goes on to say that blacks and hybrids do not work on red clover, so their source of supply must necessarily be something else.

Mr. Hart mistakes; I did not say or intimate that his question was entitled to no consideration. But for the two hypotheses which he made use of to explain the difference in question, I had a very poor opinion; and, from his own admissions, I am led to believe that he did not think them worth much himself. The only reason (?) thus far elicited for the difference under consideration is that given by Mr. Volkert. He says that it is because the Italians are more active than other bees. Is Mr. Hart satisfied with that? My belief still is that there is no difference under the conditions named, and that Mr. Hart has started bee-keepers in the pursuit of an ignus fatuus. But let us have peace. Decatur Co., Iowa.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

What Caused the Inverted Brood?

Before the larvæ gets large enough to cap over, it turns in the cell with the head downward and dies thus. About ¼ of the brood is that way—not all in one place but scattered through the hive. IOWA.

ANSWER.—Just as you put it, I don't know that I ever heard of the like before. Up to the time of sealing, the brood, I think you will find, is coiled in a circle. But after it is sealed over it may finally get wrong-end-to, and that same thing has been reported in a few cases, the young bee being found dead in the cell with its head toward the bottom. It may result from weakness on the part of the bees.

Mothy Foundation.

We have a lot of brood-foundation which has been used and is dark in color; something has gotten into it like moth, and weaves a web over portions, and it looks like eggs under the web in the cells. How would you advise me to get rid of this? Can the bees work where this is? Is it not rather extravagant to cut it out and throw it away? NEW MEXICO.

ANSWER.—Try giving it to the bees just as it is, and see if they'll not clean it up all right.

Cessation of Honey-Flow Stops Work.

I raised the section up and put another case on when the first was about half full. The bees immediately stopt work in the sections. What was the cause? Some colonies stopt work when I took a few full sections off the hive; they had only one super on.

The bees would draw out the foundation in sections and not complete them. Why? CALIFORNIA.

ANSWER.—You have in all probability given the answer yourself to both questions when you say, "This is a poor year with me." Raising up a partly-filled super and putting an empty one under had nothing to do with the bees stopping work. About that time the honey-flow let up, and the bees would have stopt work in the super if you hadn't toucht it. The same is true as to your taking out the filled sections. If the honey-flow had kept up they would have gone right on in both cases.

Examining for Filled Sections, Etc.

1. Can bees be disturbed too often in examining through the sections to hinder them from working in them?

2. How often ought they to be lookt after to see if the sections need removing?

3. One of my colonies came out three or four times in June and went back. The last time it staid out, and on examining I found it had two queens. I put the finest one in, and it seemed to do well for about six days, when it came out, flew around, and went back into the hive. On examining it I found it had no brood and no queen. What became of the queen? I gave it a frame of brood, and in 12 days lookt and it had failed to rear a queen. Why did it not rear a queen?

4. Are not some bees better workers than others? OHIO.

ANSWERS.—1. No doubt they could be disturbed too much, but it isn't at all likely you need be anxious about it. It isn't necessary to look once a day to see how the sections are progressing, but a daily visit would hardly do any harm.

2. Perhaps every 5 to 10 days. If honey is coming in rapidly, they need closer attention than when it is coming in slowly.

3. The first time it came out, the probability is that the old queen was present, but she couldn't fly or was killed in some way. A week or more after the first time they came out, the young queens had emerged from their cells, and then when

the swarm came out you found two of the queens. Five or six days later you saw the swarm come out, fly around and return. That was at the time of the queen's wedding-flight. You examined it and found no brood, because the old queen had been gone so long there was no unsealed brood in the hive (there was probably sealed brood present) and the young queen had not commenced to lay. You found no queen, but that's very far from proof there was no queen present, for the most experienced fail sometimes to find a queen that is not yet laying. They probably refused to rear a queen from the brood you gave them because they already had a queen. If nothing has happened to the queen you probably will find there is plenty of brood in the hive now. The study of a bee-book will be of great benefit to you in clearing up this and many other points.

4. Yes, indeed, there's a big difference in bees. One colony will store up quite a surplus, while another standing right beside it, and apparently just as strong, will not more than make its own living.

Chickens in the Apiary—Sowing Alfalfa.

1. Would it do to put enough old hens or young chicks in the apiary to keep down the grass? Would that be a proper place for bees?

2. When is the best time to sow alfalfa? Could it be sown in the fall after taking off a potato crop? MARYLAND.

ANSWERS.—1. It would be all right so far as the bees are concerned. The only question is whether you care to have the filth the poultry would make. Sometimes I get so tired that I want to stretch myself out on the ground for a few minutes (altho this is more especially so in the out-apiaries), and then I want to have a perfectly clean place.

2. Inquire of the farmers in your neighborhood as to the best time to sow.

Something for an Entomologist.

I send a sample bee. I find a great many of them in my neighborhood. What species is it? CINCINNATI.

ANSWER.—I'm not entomologist enough to tell what kind of a bee it is, if indeed it is a bee at all. Send a specimen to your State entomologist, but don't simply put it in a letter, for it gets so masht in the mails as to be beyond recognition. Bore a hole in a little block of wood, and it will go safely in that.

Not Working in the Super—Ants in Hives.

1. I have a colony of bees in a Langstroth hive, and about a week ago I put the super on, but it seems they don't want to work in it. What shall I do about it?

2. I have a mother colony in an old-fashioned hive which has only seven frames, and a small honey-board over them, and under the honey-board is a whole pile of ants; they seem to be bothering the bees a great deal. How can I get rid of them without disturbing the bees?

3. Do ants eat honey?

4. How much space should there be between the brood-frames and the super? ILLINOIS.

ANSWERS.—1. Put in the super a section that has had the comb drawn out in it. It may be a section that had some honey in it last year and was emptied out by the bees, or it may be a section taken from another colony that is working in its super. If you have neither of these, put a piece of drone-brood from the hive in one of the sections, and you may be sure the bees will go up and take care of it. It is quite possible, however, that your bees are like a great many others—they are not working in the supers because they are not able to get any more stores than will easily be used in the brood-chamber. Bees cannot store when there is no harvest, and when the harvest is poor only the strongest can store.

2. If, as appears to be the case, the ants are under the honey-board and over the frames, they are in a place where the bees have free access, and the colony must be very weak to allow them there. The remedy is to strengthen the colony, or wait till it gets stronger. You may, however, outwit the ants by having the hive set on four feet, each foot resting in an old can or dish of some kind containing oil.

3. Ants probably eat honey when they get a chance, but perhaps that's not their usual aim in settling over a colony of bees. They settle there because it is a warm, comfortable place. When I used sheets or quilts over my brood-frames, and covers over these, the ants troubled greatly by making their nests over the quilts. Since board covers have been used with no quilt between the top-bars and the board cover, there has never been the least trouble from ants. The bees take care of them.

4. About ¼ of an inch.

BIOGRAPHICAL

DR. H. BESSE.

The following sketch of Dr. Besse, of Delaware Co., Ohio, is kindly furnisht us by himself:

I was born in Licking Co., Ohio, May 12, 1823. My father, with his parents, settled there in 1812, and were the first settlers in the township of Lima.

From my earliest recollection there were many wild bees in the woods, and men that knew how to handle them. I will give one instance:

I had an uncle for whom I was named—Henry Besse—who was out hunting one day, and came across a large swarm of bees clustered on a bush, 1½ miles from his home, yet he was bound to take them home. So he took off his shirt, a home-made linen one, and the only one he had on. He was also bare-footed. This left him with nothing on except a pair of linen trousers and a straw hat. He tied a knot in each sleeve of the shirt, then took thorns and pinned the bosom and neck securely. He then took hold of the lower part of the improvised sack and shook the bees into it, and tied it securely with bark. He put his gun through a loop in the bark string, and shouldered his gun and bees, marching proudly home without receiving a sting. He used to keep 25 to 30 colonies all in the old gum hives. When I was a small boy I used to accompany this uncle on his bee-hunts. This, I suppose, is where I got my first inspiration for bee-culture.

The first money I ever earned for myself when 12 years old was for dropping corn for a farmer, who had five or six colonies. When he came to pay me I took one of his colonies instead of three silver dollars, and have had bees ever since, except a short time during the Civil War, when I was a surgeon of the 45th O. V. I., and also surgeon of the 145th O. V. I.

I have practiced medicine and surgery since 1847, but have almost given it up for the last 10 years on account of disability contracted in the army.

I have now (July 29) over 100 colonies of bees, but the honey crop in this locality is almost an entire failure. If we do not get a fall flow of honey I shall have to feed my bees or let them starve.

I have taken the old American Bee Journal ever since its birth, and should feel lost without it. H. BESSE.

It will be remembered by many of our readers that Dr. Besse is the man who had a field of sweet clover mowed down by the township trustees about two years ago, they thinking that the law was still in force including sweet clover as a noxious weed in that State. The Doctor lost his case in the local court, and we do not know whether an appeal was taken.

Dr. Besse is one of the very few who have taken the American Bee Journal continuously from its birth—January, 1861. In former years he used to write for it. But when a man gets to be 75 years old he isn't expected to do as much as when a score or more of years younger.

We have had the pleasure of meeting Dr. B. at several of the annual bee-keepers' conventions, in which he takes great interest, and gets in his share of bee-talk.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all other bee-keepers possible to subscribe for it. See premium offers on page 523.

AMERICAN
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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Place and Date of Next Meeting:
Omaha, Nebr., Sept. 13, 14 and 15, at the Delone Hotel, Cor. 14th Street and Capitol Avenue.

VOL. 38. AUGUST 18, 1898. NO. 33.

EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Omaha Convention Rates may be lower than at first announced. Secretary Mason received a letter from Mr. Whitcomb, Aug. 6, in which he wrote:

"We are quite confident that the rates will be lower than those named, and that we will be able to get a one-cent rate before the convention."

We hope that all who possibly can do so will arrange to go to the Omaha convention. Remember the date—Sept. 13, 14 and 15.

◆

Facing Comb Honey.—We had not intended saying anything more on this subject, but as Mr. Doolittle, in a private letter, exprest the hope that we would have the "moral courage" to publish an editorial by Mr. Hill, of the American Bee-Keeper, we of course gladly comply, but of course it doesn't take any "moral courage" on our part to do it. Here is the editorial in full:

> Quite a thorough discussion through some of the bee-journals has been occasioned by an article from Aaron Snyder in Gleanings, wherein bee-keepers are accused of dishonesty in crating honey for market, it being averred by Mr. Snyder that inferior grades are, to a damaging extent, fraudulently concealed behind a facing of finer goods next to the glass.
>
> In the course of discussions pro and con, Mr. Doolittle exprest the opinion that so long as honey was shipt to be sold on commission, there could be nothing really dishonest in the act of packing a variety of grades in any particular manner that might suit the fancy of the producer, in one crate. Tho he distinctly says he doubts the wisdom of such packing, we regret to note an inclination upon the part of certain of his critics to place an entirely unwarranted construction upon what he has written. Who will say that any producer has not a moral right to ship any crate of his product, whether it be good, bad or indifferent, to a commission house handling such goods, to be sold on its merits, and for what it will bring? And who, again, cannot see the fallacy of mixing up several grades in a case, when, by separating them into their respective classes, according to establisht rules, a better price is obtained?
>
> As a final result of the controversy, the American Bee Journal instituted a canvass of the leading commission houses, soliciting an expression of their views upon the subject of "facing," etc., and the publisht replies in nearly every case accord with Mr. Doolittle's views, that tho not necessarily fraudulent, it is an unwise practice, reacting to the detriment of the shipper.

We see no reason to reconsider our stand against facing comb honey by anyone or anywhere. Not only would such a shipper justly suffer directly, but often an odium attaches to a whole fraternity on account of the actions of a careless few, causing many innocent ones to suffer unjustly. We don't believe any one has a "moral right" to do that which will injure himself and others.

Editor Hutchinson, of the Bee-Keepers' Review, wisely said this, when referring to the subject of facing comb honey:

> "The best rule that I can give in the matter, is called the *golden rule*. So crate your honey that, if by chance you should unknowingly buy one of *your own cases* of honey, you would not be disappointed when you opened it."

All who wish to do right ought to be able to stand on that non-facing platform.

While we think that Mr. Doolittle took a rather peculiar stand on the "facing" question, we are sure he did not intend to advocate deception in any way in putting up comb honey for market. He is too righteous a man to knowingly advise doing wrong, or even countenance it. If anything we have publisht seemed to reflect upon Mr. Doolittle's good character, we wish to say that we did not so intend it.

◆

Abbreviating This Journal.—After copying our editorial on page 473, Editor Hutchinson, of the Bee-Keepers' Review, had this kind word to say in regard to it:

> There are minor points in the foregoing to which I might take exceptions, but perhaps it isn't worth while to argue over them, as I most certainly agree with Bro. York that credit should be given in such a manner that no doubt of the identity of the journal referred to can exist. I am satisfied, however, that no abbreviations are used that are not fully understood by any bee-keeper who is at all conversant with apicultural literature; but new readers might not fully understand; besides this, there is another point that I did not consider before, viz.: if a copied article with an abbreviated credit should be re-copied, say, into a farm journal, full credit would probably be lost, as most of the readers of an agricultural journal might not know the meaning of "A. B. J.," nor of "Review," nor "Gleanings," nor "Progressive."

In the same issue, Mr. R. L. Taylor—our contemporary's critic—referring to this same subject, said:

> Editor York also takes me to task for using the letters "A. B. J." for American Bee Journal. I beg his pardon. A man's name should be written and pronounced as he chooses to have it, and the name of a man's publication should also, I suppose, appear as he likes it. But I was innocent. I thought it was a great distinction to be conscious that one's journal enjoyed the eminence of being known everywhere by the initials of its name simply. But it is so unusual to have to write the full name in a reference, in parenthesis, that I hope he will have the grace to yield to that extent.

All right, Mr. Taylor, in a parenthetical reference you can initial this journal provided you treat all others in the same way. We want to be as "graceful" as possible, and so we want nothing that the other papers do not get. We prefer not to have any partiality shown toward our paper. But we are quite willing to trust the Bee-Keepers' Review to do the right thing hereafter in this matter. And we hope that the other bee-papers will also do likewise.

Burlington Route

The "C. B. & Q."—Chicago, Burlington & Quincy—is one of the greatest railroads in all this western country. It is the direct route from Chicago to Omaha—where the United States Bee-Keepers' Union will hold its annual meeting Sept. 13, 14 and 15. Only about a month yet, and then there should be assembled the largest convention of bee-keepers ever held on this continent.

On the "Burlington Route" the round-trip fare from Chicago will be only $14.75. The editor of the American Bee Journal, and President of the Union, expects to go to Omaha on the C. B. & Q. The train will leave here at 5:50 p. m., Monday, Sept. 11, and arrive in Omaha at 8:10 a.m., Tuesday—about two hours before the convention opens.

Why cannot a large company from the East and around Chicago arrange to go on that train? We will see to it that splendid accommodations are secured, if all will notify us in time, that they have purchast their tickets over the "Burlington Route" from Chicago to Omaha.

Please let us know if you can join the company that will leave Chicago as mentioned above.

◆

Farmer's Institutes—Eucalyptus.—Prof. A. J. Cook is still working in the farmer's institutes of Southern California. August 1 he wrote us as follows:

> Last week I conducted three large, enthusiastic farmer's institutes in San Diego county—the greatest bee-county, I believe, in the world. The institutes were held at Fallbrook, Lemon Grove, and Ramona. All these places—especially the first and the last—are in close proximity to the mountains, indeed are nestled right in the mountains, and are famous for the honey product secured. At Ramona and on up to Julian the rains have been exceptionally copious this season, and so a honey crop has been secured, which in some cases has been quite satisfactory.
>
> At the Fallbrook Institute a Mr. H. M. Peters gave a fine paper on honey-production. Mr. Peters urges that in off years, like the present in his section, bee-keepers study to restrain breeding so as to conserve the honey stores. A Mr. Gunn—a very intelligent bee-keeper of Julian—said honey in that region is as near a free gift as is anything that the farmer produces.
>
> The male pepper-trees are now ringing with the hum of the bees. Of course, the bees are there for pollen. There are some bees visiting the pistilate bloom, but comparatively few.
>
> The brilliant red eucalyptus is now in full bloom. The beautiful scarlet flowers are sparkling with nectar-drops, and are favorites with the bees, as they are with all lovers of grace and beauty. Others of the eucalyptus are also in bloom, but the flowers are white. These have been throwing out their showy tassels for weeks, and as I pass under the trees in the early morning—5:30 each day—I am greeted with the music which is so enjoyed by all apiarists. I believe that the eucalyptus will be a very valuable adjunct to honey-production in this region, as the many species now being set out come into bloom.
>
> A. J. Cook.
>
> Los Angeles Co., Calif., Aug. 1.

◆

Bees Destroy 300 Cattle.—The following report was publisht in the Chicago Record of Aug. 1:

> Bancroft, Nebr., July 31.—J. McKeegan's famous bunch of short-horned cattle, numbering 300 head, was totally lost yesterday in a singular manner. The stock was pasturing in the reservation on a high bluff overlooking the Missouri river. The cattle were suddenly attackt by several swarms of wild bees, which occupy trees on the bluffs. In their terror and pain the whole herd jumpt over the bluffs into the river and were either dasht to pieces or drowned before assistance could reach them.

As in most cases of this kind, later reports may considerably modify the account.

THE WEEKLY BUDGET

Mr. James T. Kellie, of Kearney Co., Neb., called on us last week, when on his way home from Canada, where he had been to attend the funeral of his aged father. Mr. K. has about 40 colonies of bees.

Mr. John S. Frakes, of Perry Co., Indiana, writing us July 18, said:

> "I read everything contained in the American Bee Journal, and would not be without it for five times its cost. If I had only one colony of bees I would want it."

Mr. W. J. Forehand, of Lowndes Co., Ala., wrote us Aug. 9:

> "Enclosed find 25 cents for the Langstroth Monument Fund from Lorain Langstroth Forehand—my little boy whom I named for Father Langstroth. Also 25 cents from myself for the same purpose.

Mr. Wm. A. Selser, of Philadelphia, is reported by the Bee-Keepers' Review, to have bottled and sold 30 tons of honey last year. That shows what push and enterprise will do. Suppose every large city were thus to be supplied. What an enormous outlet for honey that would be. Where are the Selsers of other cities?

Messrs. Chas. and C. P. Dadant—father and son—the great comb foundation makers, gave us a very pleasant call Aug. 11. The senior Dadant will spend six weeks or so in Wisconsin, and "C. P." will make a two or three weeks' trip on the lakes. They report a good foundation business this season, but no honey crop worth mentioning.

Mr. A. I. Root—that man of hobbies—has given up his market wagon that he has been running for a dozen years, and is also giving up the department store that has been running many years longer. He is tapering off on wheat and potatoes, with electricity as a side-dish. But he won't get through "hobbying," until, like Alexander the Great, there are no more worlds for him to conquer, or explore.

Mr. W. A. Gridley, of Douglas Co., Oregon, when renewing his subscription July 23, and also taking the book, "Langstroth on the Honey-Bee," said:

> "I love the American Bee Journal—yes, I do. I have the 'A B C of Bee-Culture,' 'Bee-Keepers' Guide,' 'Advanced Bee-Culture,' and 'Success in Bee-Culture,' and could not spare any one of these—they are all very useful to me; and now I want to see what 'Pap' has to say."

Mr. G. M. Doolittle, of Onondaga Co., N.Y., writing us Aug. 5, gave this report:

> "I have about 25 pounds to the colony of white comb honey here, and 50 pounds at the out-apiary, while neighbors have little or nothing. A poor year shows that proper manipulation of bees counts, while in a good year even the novice may succeed."

The foregoing shows the estimate Mr. Doolittle places on "proper manipulation of bees." Knowing how is a great thing—the difference between success and failure.

Hon. R. L. Taylor, in the August Bee-Keepers' Review, referring to our criticism of his attempt to reform the grammar used by correspondents of the bee-papers, thinks that we have a poor opinion of the literary ability of bee-keepers. He closes with this good comment on us:

> "An editor who so lately 'started out to reform' spelling should not so suddenly despair on the point of grammar."

That does take out a little of the inflation in our sails. But, Mr. Taylor, let us whisper in your ear that the *editor* is to blame if he permits anything ungrammatical to appear in his paper. It is his business to "edit" the copy before it is put in type. It is not supposed that all who write for the public press are experts in a literary way. They do the best they can, and then it is the editor's duty to see that errors of all kinds are corrected before it is finally printed. So when Mr. Taylor criticises the grammar or language used in the bee-papers, he is really hitting "ye editors." And we all need it, occasionally, for some of us get careless betimes. Even Critic Taylor himself has his lapses occasionally, but we'll not take the space to refer to more of them now. But he's a bright man, and knows it. However, the best of us do err sometimes. None is perfect.

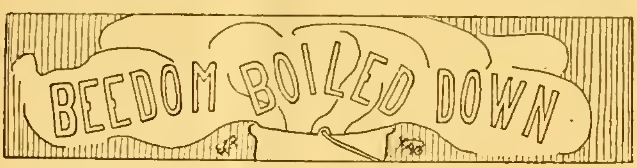
A Queen-Bee Advertiser from the South wrote us last week:

"My advertisement in the American Bee Journal has panned out very well. I have sold over 50 queens from the last three insertions, and a lot more prospective orders from them. When I want to do some more business quick, I will try the American Bee Journal again."

There are many more queen-dealers who might increase their business if they would advertise in this paper. Let people know where you are and what you have to sell, if you wish to do business.

Mr. J. S. Hartzell, of Somerset Co., Pa., has sent an article for publication on the "Golden" method of comb honey production, which we will try to give next week. In an accompanying letter, Mr. H. says:

"Enclosed is a reply to Mr. S. A. Deacon's inquiry on page 483, in which my name appears as an advocate of the Golden method of producing comb honey, and being such I am not ashamed of the cause espoused, by any means; and much more jubilant this year than last, as I have more colonies running on the Golden plan, and results will be more satisfactory in regard to the financial part of the remainder of the story when told."



The Price of Bees in movable-frame hives, says G. M. Doolittle, in Gleanings, should be, in lots of 10 or more, $3.50 a colony in the fall, and $5.00 in the spring.

Raising Hives on Four Blocks, while it reduces swarming and prevents hanging out, according to Mr. Burt, in Gleanings, is a big nuisance in swarming-time, for a clipt queen may go out at any one of the four sides, and the bee-keeper doesn't know where to look for her.

Bees Hanging Out is credited by M. H. Dunn (in Gleanings) in large measure to the presence of drones. So he prevents it by keeping out drones. At the same time he gives plenty of room and ventilation, which alone might prevent hanging out without involving the drones.

The Average Annual Yield of Honey for an Italian colony throughout the United States among specialists is 50 pounds, says Doolittle. His own annual average for nearly 20 years, up to the time he went largely into queen-rearing, was 80 pounds, ranging from 30 in his poorest year to 166 in his best year.—Gleanings.

Getting Sections Filled Out to the Wood.—At the convention at Buffalo, Mr. Danzenbaker showed some sections that were greatly admired, the cells being filled and capt clear out to the wood. One secret of it, according to Mr. Weed, in Gleanings, is in having full sheets of foundation, the sheets reaching out clear to the sides and touching the wood. If it reaches only to within ⅛-inch of the sides, pop-holes are sure to result.

Rearing Queen-Cells a la Doolittle.—Gleanings reports that their Mr. Wardell is now very successful in rearing queens according to the plans given in "Doolittle on Queen-Rearing." He obtains the best results by giving the artificial cell-cups to colonies about to supersede their queens. From one colony he has taken three batches and has given them the fourth. As they have a queen they don't get discouraged, but go right on starting cells afresh. After the cells are sealed they are put in a queenless colony, and about the ninth day are put in West's protectors, the protector-cage is put into a hatching-cage at the bottom of which is honey for the young queen when she hatches, and she can wait there two or three days to be introduced where desired. Editor Root says: "One great feature of the Doolittle system is that it enables one to rear *all or nearly all the queens from one selected mother.*"

The First Successful Shipment of Bees to New Zealand was made by Judge Noah Levering, says Rambler, in Gleanings. Previous efforts to obtain Italian bees had failed, but in 1880 Mr. Levering shipt two colonies which made safely the sea voyage of 7,000 miles. Ample ventilation was given, the combs were old and strong, natural stores were used, and a sponge provided water which was renewed as needed. He made many subsequent shipments without a single loss.

Apis Dorsata.—Rev. W. E. Rambo, the missionary in India who is trying to get Apis dorsata for the A. I. Root Co., reports that he hears big stories about them, but can't get hold of any, as yet. He says:

"Everything seems to point to their being migratory. However, the fact that the government lets out the gathering of honey and wax to a contractor whose business it is to make his profit by seizing every colony he can find at its highest development, may indicate a habit which, if the bees were undisturbed, would not exist."

Foundation in Sections.—R. C. Aikin thinks foundation does not differ from natural comb in taste, but is tougher. The main object he has in using foundation in sections is to start the bees in the right place, a narrow strip at the top and one at the bottom being sufficient. But a full sheet has a good effect in the way of bait. He does not value full sheets to prevent drone-comb in sections, believing that drone-comb in sections looks just as well as worker comb. The editor of Gleanings differs from him in this last view. Moreover, he has shown that nature-built drone-comb is considerably gobbler than worker-comb built on ordinary thin foundation.

A Recipe for Starting Foul Brood is thus given by J. F. Teel, in Gleanings:

"Cut out about three gallons of brood, both drone and worker. Put it between ice, so it will freeze to death, then put it out in some warm place, about 70 or 80 degrees. Keep it in bulk, and moist all the time for 10 or 12 days; then put it in water, and make the bees sip at it a few days, and that will be sufficient."

Some people would prefer to go without foul brood rather than to go to all that trouble. The editor agrees with many others that no foul brood can be started without the seed, that is, the spores of bacillus alvei, Mr. Teel believing, however, that the seed is present in every larva, only developing under proper conditions.

Honey as Food is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey among should-be consumers. The forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 20 cents; 50 for 35 cents; 100 for 65 cents; 250 for $1.50; 500 for $2.75. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for $1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at $1.00), and 10 cents extra.

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

FOR THE READERS OF THE AMERICAN BEE JOURNAL.

PROFITABLE BEE-KEEPING,

—WITH—

HINTS TO BEGINNERS.......

By Mr. C. N. White, of England,

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

Mr. White is owner of one of the largest apiaries in the country where he lives, and has made a life study of the subject. He is also lecturer, under the Technical Education Scheme, to several County Councils in England. He will treat the subject in a

Series of Nine Illustrated Articles:

1. General and Introductory.
2. Bees.
3. Handling Bees.
4. Swarming.
5. Hives.
6. Foundation.
7. Superlng.
8. Diseases.
9. Wintering

This is a series of practical articles that bee-keepers of the United States will not want to miss reading. They will appear only in the AMERICAN BEE JOURNAL.

We want our present readers to begin at once to get their neighbor bee-keepers to subscribe for the Bee Journal for the last six months of 1898, and thus read the articles by Mr. White. In order that all may be able to take advantage of this rare opportunity to learn from a successful and practical English authority on bee-keeping, we will send the American Bee Journal for

The balance of 1898 for only 40 cents—
To a NEW Subscriber—thus making it

SIX MONTHS FOR ONLY FORTY CENTS—

Which can be sent in stamps or silver. If you are a subscriber already, show the offer to your bee-keeping neighbors, or get their subscriptions, and we will give YOU, for your trouble, your choice of ONE of the following list, for each NEW 40-cent subscriber you send:

For Sending ONE New 40-cent Subscriber:

1 Wood Binder for a Year's Bee Journals
2 Queen-Clipping Device
3 Handbook of Health—Dr. Foote
4 Poultry for Market—Fan. Field
5 Turkeys for Market—Fan Field
6 Our Poultry Doctor—Fan Field
7 Capons and Caponizing—Field
8 Kendall's Horse-Book
9 Mullen's Horse-Book
10 Foul Brood—by Dr. Howard
11 Silo and Silage—by Prof. Cook
12 Foul Brood Treatment—by Prof. Cheshire
13 Foul Brood—by A. R. Kohnke
14 Muth's Practical Hints to Bee-Keepers
15 15 "Honey as Food" Pamphlets
16 Rural Life

For Sending TWO New 40-cent Subscribers:

1 Potato Culture—by T. B. Terry
2 Green's Four Books
3 Ropp's Commercial Calculator
4 Dr. Tinker's Bee-Keeping for Profit
5 40 "Honey as Food" Pamphlets
6 Winter Problem in Bee-Keeping—by Pierce
7 Hutchinson's "Advanced Bee-Culture
8 Dr Brown's "Bee-Keeping for Beginners"
9 Bienen-Kultur—German
10 Bees and Honey—160 pages—by Newman
11 People's Atlas of the World

All New Subscriptions Begin July 1.

Please remember that all the above premiums are offered **only** to those who are now subscribers, and who will send in new ones. A new subscriber at 40 cents cannot also claim a premium.

Now, let every one go to work, and help roll up the largest list of subscribers the old American Bee Journal ever had. It can easily be done if ALL who possibly can get a few new subscribers will kindly do so.

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

Be It Known

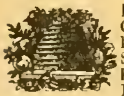
To all Men, we are prepared to fill orders promptly for

CHOICE QUEENS of the best strains of Golden or Leather-Colored Italians....

Tested $1 00; Untested—one. 75c; three, $1.50. After July 1, 50c each. Remit by Express Money Order, payable at Barnum, Wis. One and two-cent stamps taken. Address,

Van Allen & Williams,
25Atf BARNUM, WIS.

Please mention Bee Journal when writing.



Bee-Hives, Sections, Shipping-Cases—everything used by bee-keepers. Orders filled promptly. Send for catalog. MINNESOTA BEE-KEEPERS' SUPPLY MFG. CO., Nicollet Island, Minneapolis, Minn.

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ONE MAN WITH THE UNION COMBINATION SAW

Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing, Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery Sold on Trial. Catalogue Free.

SENECA FALLS MFG. CO.,
46 Water St SENECA FALLS, N. Y

Please mention Bee Journal when writing.

BEES! Florida Italian QUEENS!

Tested Queens, $1.00 each; Untested, 50c. Prompt and satisfactory dealing.

Address, E. L. CARRINGTON,
11Atf De Funiak Springs, Fla.

Please mention Bee Journal when writing.

GENERAL ITEMS

Expect Better Honey-Flow.

Bees are in fine condition. I have 93 colonies now, and I had 41 last spring. We have had good rains, so the honey-flow will be better in a week from now.

C. G. MATSON.

Chisago Co., Minn., Aug. 4.

Had a Good Honey-Flow.

We have had a good flow of honey for the last 30 days. I keep nothing but the best Italian bees, and they will average 75 pounds to the colony, of comb honey. Our main flow is from cotton. We have had a heavy honey-dew, but my bees do not work on it.

J. B. SCOGGIN.

Red River Co., Texas, Aug. 8.

Side or Top Storing.

Mr. Frank Benton says in Farmers' Bulletin, No. 59: "A construction (of bee-hives) which readily admits of expansion and of contraction is desirable." Why do bee-keepers most generally prefer to have the honey stored on top of the brood-frames instead of at their side? Does a construction with all combs in one long hive not admit more expansion and contraction than a hive with stories? German bee-keepers of long experience say the first arrange-

Southern Home of the Honey-Bee

Will continue to rear none but the BEST QUEENS. Untested, 50 cents; Tested, $1.00.

GEO. W. HUFSTEDLER, Prop.,
President of National Queen-Breeders' Union,
24Atf Beeville, Texas.

Please mention Bee Journal when writing.

QUEENS Italian stock. Untested, 70c each; 3 for $2 00 After July 1, 50 cents each; tested, $1.00 each. Root's Goods at Root's Prices. Prompt shipment and satisfaction guaranteed. Catalog free.

THEODORE BENDER,
20Atf Canton, Ohio.

Please mention Bee Journal when writing.

☞ IF YOU WANT THE —BEE-BOOK

That covers the whole Apicultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keeper's Guide.

Liberal Discounts to the Trade.

Please mention Bee Journal when writing.

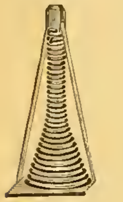
Nickel Plate Excursion to Boston.

Tickets on sale for trains leaving Chicago Sept. 16 to 18, inclusive, at rate of $19.00 for the round-trip, and good returning until Sept. 30. Also cheap rates to all points East. Vestibuled sleeping-cars to Boston, and solid train to New York. Rates lower than via other lines. For further information call on or address, J. Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone Main 3389. (60-32-6)

DR. PEIRO,

CENTRAL MUSIC HALL, CHICAGO.

Please mention Bee Journal when writing.



Queen-Clipping Device Free

The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

SPECIAL OFFER ⁂

For the next 90 days we will sell warranted purely mated **ITALIAN QUEENS** at 50 cts. each; half dozen, $2.50; tested, 60 cts. each; half dozen, $3.00. Safe arrival guaranteed. Fifteen years' experience in queen-rearing.

LEININGER BROS, Fort Jennings, Ohio.

Please mention the Bee Journal. 33Dtf

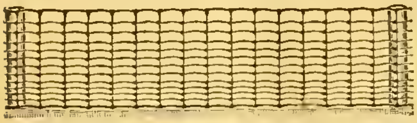
OUR PRICES are worth looking at. We are making the new

Champion Chaff-Hive

with dovetailed body and supers, and a full line of other Supplies, and we are selling them CHEAP. A postal sent for a price-list may save you $$$$

R. H. SCHMIDT & CO.,

Box 187 SHEBOYGAN, WIS.



"FOR HUMANITY'S SAKE"

we fight, we win, we mark new boundaries. **It's humane** to mark your lines with Page Fence. A marker that hurts **nothing**, holds **everything**.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

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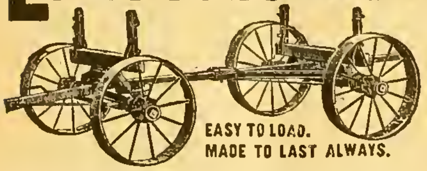
ELECTRIC HANDY WAGON



EASY TO LOAD.
MADE TO LAST ALWAYS.

Our perfect knowledge of this wagon and the quality of material used in its construction leads us to declare it to be the **NEATEST, STRONGEST, MOST DURABLE, LONGEST LIVED, EASIEST TO LOAD** wagon made. Has our famous straight or stagger spoke

Electric Steel Wheels

Wheels have any width of tire, from 2 to 8 inches; any height, from 24 to 60 inches. Impervious to heat or cold; can't dry out, get loose or rot; **NO RESETTING TIRES** and repairs. Best angl steel hounds. First class brake $4.00 extra. **All F. O. B. For $25.00**

It has given universal satisfaction and will fit your requests exactly. Don't buy until you get our **FREE** catalogue and prices. Write for them at once.

ELECTRIC WHEEL CO. BOX 16, QUINCY, ILLS.

FREE FOR A MONTH.

If you are interested in sheep in any way you cannot afford to be without the best and only weekly sheep paper published in the United States.

WOOL MARKETS AND SHEEP ⁂

has a hobby which is the sheep breeder and his industry, first foremost and all the time. Are you interested? Write to-day

Wool Markets & Sheep, - - Chicago

ment gives more honey than the latter; why, then, should it not be preferred, provided with good care for wintering? Would bees rather enter a super above the brood-chamber than one at the side?

VIRGINIA.

Bees Doing Poorly.

Bees are doing poorly. It was too wet in the spring, and too dry and cold now. I have 29 colonies, and will get about 200 pounds of honey.

S. W. CLELAND.

Wabaunsee Co., Kan., Aug. 2.

Not Half a Crop.

The bee and honey business is under a cloud in this vicinity this season. After the abundant rains we were expecting a good crop, as we have white and sweet clover in abundance. But so far there has been but little swarming, and many bee-men report no surplus honey. We have had good rains and may yet get a fair crop from fall flowers and buckwheat. It is now safe to say, tho, that the crop in this county will not be one-half of last year's. KANKAKEE.

Kankakee Co., Ill., Aug. 1.

Honey Crop Very Good.

The honey crop is very good, with respect to both quantity and quality. We dispose of our surplus at our door—comb, 12½ cents; extracted, 10 cents per pound. Our prices, like the laws of the Medes and Persians, are unchangeable, wet or dry, hot or cold.

WM. J. DURBIN.

Fayette Co., Ind., Aug. 2.

Wet Season.

The season was so wet here that the bees did not do much in apple-bloom, but white clover and basswood were good. There is a dry time now that seems to have stopt the honey-flow, but bees seem to be busy carrying pollen from corn and hemp. W. A. SAVAGE.

Sauk Co., Wis., July 27.

Poor Honey Crop.

The honey crop in this locality has been poor—very little surplus—tho bees are in fine condition, and the conditions have been fine for queen-rearing, that being a small amount of honey coming in all the time, sufficient to keep up the proper excitement, and no inclination to want to rob, tho we are having a great deal of rain. I can leave honey exposed in my apiary of 150 colonies without any trouble.

W. J. FOREHAND.

Lowndes Co., Ala., Aug. 9.

Top Ventilation of Hives.

In nearly every edition of the American Bee Journal some reference is made to the ventilation of the hives. Many of the bee-keepers say they wedge the cover of the hive up on sticks.

I have edgewise cleats across the ends of my hive-covers, and to give ventilation the rear end of the cover is raised a little and shoved forward until the rear cleat rests on the hive. This gives an abundant amount of ventilation, and one does not have to be bothered with carrying around a handful of wedges, and which are eternally being misplaced. In the event of a storm, and the bee-

Sweet ⁑ Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Sweet Clover (white).	.60	$1.00	$2.25	$4.00
Alsike Clover........	.70	1.25	3.00	5.75
White Clover.........	.80	1.40	3.00	5.00
Alfalfa Clover........	.60	1.00	2.25	4.00
Crimson Clover.......	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, wanted by freight.

Your orders are solicited.

GEORGE W. YORK & CO.,

118 Michigan Street, - CHICAGO, ILL.

Queens, Bees and Bee-Keepers' Supplies

Tested Queens in April and May, $1.00. Untested, 75c. Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

F. A. CROWELL,

8Atf GRANGER, MINN.

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"WATCH POUDER'S AD"

SEE THAT WINK!

Bee-Supplies! ROOT'S GOODS at Root's Prices.

Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Cat-tree. **Walter S. Pouder,**
512 Mass. Ave.,
INDIANAPOLIS, INDIANA.

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THE PLACE
TO GET YOUR

QUEENS

Is of H. G. QUIRIN, of Bellevue, Ohio.

Ten years' experience with the best of methods and breeders enables him to furnish the best of Queens—Golden Italian—Doolittle's strain—warranted purely mated, 50c; 6 for $2 75. Leather Colored same price. Safe arrival. No postage stamps wanted. 23A16t

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READY TO MAIL

My 40-page Catalog of my Specialties, and **Root's Goods at their prices.** I carry a full line of BEE-KEEPERS' SUPPLIES, and can ship promptly. Catalog Free.

GEO. E. HILTON, Fremont, Mich.

Please mention Bee Journal when writing.

Muth's HONEY-EXTRACTOR Square Glass Jars.

Root's Goods at Root's Prices.

BEE-KEEPERS' SUPPLIES in general, etc etc. Send for our new catalog.

Practical Hints" will be mailed for 10c. in stamps. Apply to—

Chas. F. Muth & Son, Cincinnati, Ohio.

Please mention Bee Journal when writing.

Meeting of Sovereign Grand Lodge, I.O.O.F., Boston, Mass., Sept. 19 to 24, Inclusive.

For this occasion the Nickel Plate Road will sell tickets at rate of one fare for the round-trip. Tickets on sale Sept. 16 to 18, inclusive, good returning until Sept. 30, inclusive. For particulars, address J. Y. Calahan, General Agent, 111 Adams Street, Chicago, Ill. Telephone Main 3389. (59-32-6)

keeper desires to close the top, just slide the cover back, and there you are. This is one of those "little things."

LOUIS R. LIGHTON.

Douglas Co., Nebr., July 26.

Good Prospect for Dark Honey.

The honey crop here from clover and basswood was very light, but there is a good prospect for dark honey.

A. W. SMITH.

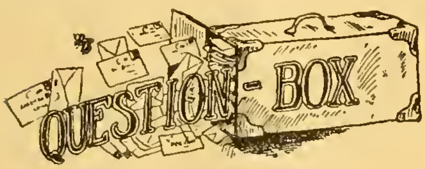
Sullivan Co., N. Y., Aug. 5.

Too Wet and then Too Dry.

I bought a colony of bees and increast one more. It was too wet last spring for a good flow of honey, and now it is too dry; the bees do not show much surplus yet, but I hope they soon can, for there is good prospect of golden-rod and many other wild flowers coming into bloom.

R. C. SUPPE.

Woodson Co., Kans., Aug. 5.



In the multitude of counsellors there is safety.—Prov. 11-14.

Gathering Propolis—Can it Be Lessened by Hive Construction?

Query 80.—Do bees gather a certain amount of propolis without regard to their needs, or do they gather only as they find places to put it? In other words, can one lessen the gathering of propolis by proper construction of hive and contents?—Ohio.

Dr. A. B. Mason—Yes.

J. M. Hambaugh—"I don't know."

Mrs. L. Harrison—They may gather more to stop up cracks.

E. France—I don't think we can do anything to change the outcome.

P. H. Elwood—The gathering of propolis is somewhat, but not altogether, the result of necessity.

Dr. C. C. Miller—They'll gather some, whether they need it or not, and perhaps they'll gather more if they need it.

Prof. A. J. Cook—I believe they gather what they need. Some would feel greater need than others, no doubt.

E. S. Lovesy—The same as with honey; as a rule they gather an abundance without any regard as to their needs.

R. L. Taylor—The amount of propolis gathered is owing more to the peculiarities of the colony than to the character of the hive.

Emerson T. Abbott—I think some colonies gather propolis just for the fun of it, and the construction of the hive has nothing to do with it.

G. M. Doolittle—Some colonies gather many times the propolis that others do. With the former the construction of hives would have little influence.

D. W. Heise—Some colonies are much worse propolizers than others, and the proper construction of hives cuts very little figure with some bees, as they will lavishly daub propolis on a smooth surface of the hive interior. But, generally speaking, the absence of rough surface, cracks and corners, will greatly lessen the desire to propolize.

HONEY

If you want Colorado Alfalfa, Sweet Clover and Cleome honey—comb or extracted—correspond with the Secretary of the Colorado State Bee-Keepers' Association. Our Honey ranks high in quality. Car lots a specialty.
Address **F. RAUCHFUSS, Elyria, Colo.**
31Atf Please mention the Bee Journal.

Best Basswood Honey in Barrels

We have a limited number of barrels of **very best Basswood** Extracted Honey, weighing NET about 280 lbs. which we are offering at 7 cents per lb. f. o. b. Chicago. Do you want a barrel or so of it? If so, address, with the cash,
GEORGE W. YORK & CO.,
CHICAGO, ILLS.

BEES, HONEY, MONEY
Queens for Business.
Supplies at Bottom Prices.
"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.
J. P. H. BROWN, Augusta, Ga.
Please mention Bee Journal when writing.

FOR SALE.

The Midland Central Apiary and fixtures to be sold. This season's honey crop—just taken off—is 25,700 pounds, or nearly 13 tons. Satisfactory reasons given for selling. For further particulars apply to
R. A. MARRISON,
33A2t **Inverary, Frontenac Co., Ont.**

BEE-KEEPERS! Let me send you my 64-page Catalog for 1898
J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing.

Cash PAID FOR Beeswax

For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 25 cents per pound, CASH. No commission. Now if you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,
GEORGE W. YORK & CO.,
CHICAGO, ILLS.

Excursion to Boston.

The Nickel Plate Road will sell excursion tickets from Chicago to Boston and return for trains of Sept. 16, 17 and 18, at rate of $19.00 for the round trip. Tickets will be valid returning until Sept. 30, inclusive. On account of heavy travel at this particular time, those desiring sleeping-car accommodations should apply early to J. Y. Calahan, General Agent, 111 Adams St., Chicago. Telephone Main 3389. (58-32-6)

Eugene Secor—I think bees gather propolis largely because of lack of nectar. I have noticed that during a generous honey-flow but little propolis is gathered.

Mrs. J. M. Null—Regardless of their needs, some localities exceed others in the production of propolis. Reduction is possible through construction of hive and fixtures.

O. O. Poppleton—Yes. I think bees gather propolis with some regard to needs, and that the amount of gathered propolis can be lessened some by the means suggested.

Rev. M. Mahin—I *think* that the quantity is governed largely by their feeling of need. There will be much less propolis in a hive that is smooth inside than in a rough one.

W. G. Larrabee — Sometimes bees gather propolis when they have no place to put it, and consequently they daub it anywhere it happens. I think they gather about so much, anyway.

J. E. Pond—Bees follow their own sweet will in the matter, but it may be assumed that the closer the joints in the hive, and the less space given generally for air to circulate, the less propolis will be used.

C. H. Dibbern—At certain times bees seem to gather propolis, tho there is no apparent use for it. I presume if the inside of the hive is smooth and tight this propensity will be somewhat lessended.

Chas. Dadant & Son — They often gather more than they need. (Witness queenless colonies whose combs become overladen with pollen.) But they often do not find enough, and it depends upon the season.

Dr. J. P. H. Brown—In seasons with a good honey-flow they generally propolize in proportion to their needs. But when the bees have a long spell of idleness they are more prone to deposit propolis to excess.

Jas. A. Stone—I think they gather it just as they happen to be disposed, for I have had some hives all stuck up with it, when at the same time other hives would have very little of it, and of a great difference as to stickiness.

R. C. Aikin—Very little is gathered during a good honey-flow. When nothing else to do, a scant or abundant supply as it may be found in the fields, much as pollen supply is governed by the field supply. We do not have a surplus of either in my present field.

S. T. Pettit—Yes, one may in a measure lessen the quantity gathered by good workmanship and careful adjustment of appliances in all their parts. But, after all, where propolis is plentiful bees will usually gather more than they can find use for, and they will daub it somewhere.

G. W. Demaree—The honey-bees in a state of nature needed some substance—propolis—to fix up their rough homes, and the instinct to gather propolis is deeply seated in the bee. How long it will take to change the habit and abate the nuisance of much bee-glue in the cleanly constructed modern hive—well, who can answer?

J. A. Green—Some colonies gather a

THE BIGGEST OFFER YET!

Last year only about one per cent—only one subscriber in 100—ordered his Review discontinued. If the Review could secure 1,000 new subscribers the present year, there is an almost absolute certainty that at least 900 of them would remain; not only next year, but for several years—as long as they are interested in bees. Once a really GOOD bee-journal visits a bee-keeper a whole year it usually becomes a permanent member of his family.

I would have no difficulty whatever in getting twice 1,000 new subscribers this year, if all of the bee-keepers in this country had read the Review the past year. I have sometimes thought that it might pay a publisher to give away his journal one year, simply for the sake of getting it into new hands. There are, of course, decided objections to such a course; but I am going to come as near to it as I dare. Here is my offer:

If you are not a subscriber to the Review, send me $1.00, and I will send you twelve back numbers, the Review the rest of this year and all of next year.

Each issue of the Review, especially if devoted to the discussion of some special topic, is really a pamphlet containing the best thoughts and experience of the best men upon the topic under discussion. Twelve back numbers of the Review are, to a certain extent, so many little books devoted to as many different phases of bee-keeping. Some issues of the Review are now out of print; of others only a few are left; while of others there are several hundred. Of course, I shall send those of which I have the most, but no two alike.

Most people subscribe for a journal at the beginning of the year. In this case there is no use of waiting, as you will get the Review for next year just the same as tho you waited until next January to subscribe, and you get all the rest of the numbers for this year FREE. The sooner you subscribe, the more free issues will you receive.

Let me tell it over once more. For $1.00 you get twelve back numbers, the Review the rest of this year, and for all of 1899.

31Dtf W. Z. HUTCHINSON, Flint, Mich.

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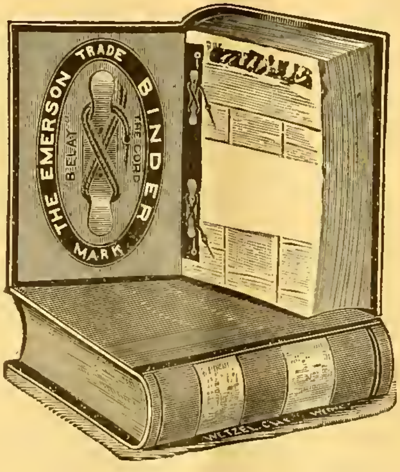

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118 Michigan Street, - CHICAGO, ILL.

great deal more propolis than they need, judged by our standards at least. Others gather a much smaller quantity. At a time when bees are gathering honey very freely they gather comparatively little propolis. We can certainly greatly lessen the quantity of propolis gathered and its deposit in the hive by a proper construction of the hive and fixtures.

Don't Forget

the excursion to Boston over the Nickel Plate Road, Sept. 16 to 18, inclusive, at rate of $19.00 for the round trip. Good returning until Sept. 30, 1898, inclusive. Tel. Main 3389. (61-32-6)

New York.—The 31st semi-annual meeting and Picnic of the Seneca County Bee-Keepers' Association will be held at Elm Beach, three miles east of Hayt's Corners, on Cayuga Lake, Tuesday, Aug. 23, 1898. Speakers from Cornell University, Ithaca, and others will be present and address the meeting. The program will begin promptly at 10 o'clock a.m. Come prepared with questions for the question-box, and for a table-picnic. A pleasure yacht will be in attendance in the afternoon. C. B. HOWARD, Sec.
Romulus, N. Y.

California.—The next meeting of the Fresno County Bee-Keepers' Association is to be held in the City Hall, Fresno, Calif., Wednesday, Sept. 14, at 10 o'clock a.m. All honey-producers are requested to attend.
Caruthers, Calif. W. A. H. GILSTRAP, Sec.

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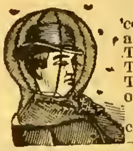

Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.

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Editorial on page 589 "Gleanings" says: "We are rearing queens from an Alley queen, whose queen-daughters are beautiful as well as her bees They are hardy, prolific, and hold their own with any colony for honey." Queens, $1 each. **HENRY ALLEY, Wenham, Mass.**

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The Bee-Keeper's Guide

This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style, The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."

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The following offer is made to PRESENT subscribers only, and no premium is also given to the two new subscribers—simply the Bee Journal for one year:

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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Aug. 10.—Some shipments of the new comb honey are coming forward; white, in good order, sells at 12c. Extracted is very steady at unchanged prices with fair arrivals. Beeswax, steady at 27c.

R. A. BURNETT & CO.

Kansas City, Aug. 11.—Fancy white comb, 13@14c; No. 1, 12@13c; amber, 10@12c. Extracted, white, 5½@6c; amber, 4½@5c. Beeswax, 22@25c.

The receipts of new honey are very light; demand fair. C. C. CLEMONS & CO.

New York, July 30.—There is some little new Southern comb honey on the market, mostly irregular quality and selling at from 9 to 11c. Extracted of all kinds is in good demand. Common grade Southern, 50 to 52c per gallon; good, 55 to 57c.; choice, 5 to 5½c. per pound; some exceptionally fine lots sell at 6c. Beeswax is very quiet at 26 to 27c.

HILDRETH BROS. & SEGELKEN.

Boston, July 9.—Fancy white in cartons, 13c.; A No. 1 white in glass-front cases, 11 to 12c.; No. 1, 10 to 11c; No. 2, 8 to 9c. Extracted, white, 6 to 7c; light amber, 5 to 6c. Beeswax, pure, in good demand with very light supply, 30c.

At the present time the demand for both comb and extracted honey is very light with but little stock on hand.

BLAKE, SCOTT & LEE.

San Francisco, Aug. 3.—White comb, 8½ to 10c; amber, 6½ to 7½c. Extracted, white, 5¼@6c.; light amber, 4¾ to 5¼c. Beeswax, 23@25c

Market is lightly stockt, and must so continue the current season, as the yield this year is very small While tolerably stiff values are ruling, not much honey is required to satisfy the demand at prevailing figures. Very little beeswax is offering. Quotable rates are unchanged, but values are more apt to go higher than lower before the season closes.

Detroit, July 21—Fancy white, 11@12c; No. 1, white, 10@11c. Extracted, white, 5@6c; dark, 4@5c. Beeswax, 25@26c.

New honey is arriving, but prices are hardly establisht. M. H. HUNT.

Minneapolis, July 26.—Fancy white clover comb is now selling at 11@12c.; amber, 10½c. Extracted fancy white clover, 5½c.; amber, 4¾@5c. Dark grades, both comb and extracted, not wanted at low prices.

S. H. HALL & CO.

Indianapolis, July 18.—Fancy white comb honey, 12@12½c; No 1, 10@11c. Extracted, white, 6@7c. Beeswax, 25@27c.

Only a few arrivals of fancy white comb; market almost bare, and demand good. Quite a little comb honey from honey-dew is being offered, but there is simply no demand for the stuff. WALTER S. POUDER.

Milwaukee, July 14.—Fancy 1-pound sections, 11@12c; A No. 1, 10@11 cents; No. 1 8@10c; amber, 7@7½c; dark and old, 6@7c. Extracted, in barrels, kegs or pails, white, 6@6½c; dark and amber, 4@5c. Beeswax, 26@28c.

Since our last the sales of honey have not been large, altho a fair demand has existed and continues, altho the fruit consumption makes some difference with eaters of honey. There is not a very large supply of old stock left, and we shall be in good order for new crop both extracted and comb. The outlook is good, A. V. BISHOP & CO.

Buffalo, Aug. 12.—Fruit prevents a large demand for any kind of honey at present. A few cases of fancy one-pound new comb can be sold daily at 11@12c.; but any grade below must be urged at proportionately lower prices. Would advise writing us before shipping here. There is no demand yet for extracted. BATTERSON & CO.

St. Louis, July 9.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

WESTCOTT COM. CO.

Cleveland, Aug. 3.—Fancy white, 13@14c; No. 1, white, 12@12½c; light amber, 11c; buckwheat, 9c. Extracted, white, 7c.; light amber, 6c.

The demand for honey is exceptionally good, owing to the crop in this vicinity being very light. A. B. WILLIAMS & CO.

Cincinnati, July 9.—Demand is slow for all kinds of honey, especially comb. Prices for best white comb honey, 10 to 13 cents. Extracted honey brings 3½ to 6c, according to quality. Beeswax in good demand at 25 to 28c for good to choice ye low.

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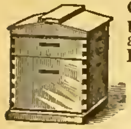

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38th Year. CHICAGO, ILL., AUGUST 25, 1898. No. 34.

CONTRIBUTED ARTICLES

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PROFITABLE BEE-KEEPING,

WITH

HINTS TO BEGINNERS,

BY

C. N. WHITE, OF ENGLAND.

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

No. 8.—MARKETING AND DISEASES.

Having learnt, and become able to carry into practice the principles of success that have been enunciated in these articles, there would appear to be no difficulty presenting itself to the enthusiastic bee keeper. But this is not so, for there are many successful producers of honey who are unsuccessful in disposing of it. "What are we to do with our honey?" is a frequent cry. The general reply, "Sell it," will not be a sufficient answer to that question here, and therefore I will give a few hints on the preparation of honey for the market and the means of its disposal.

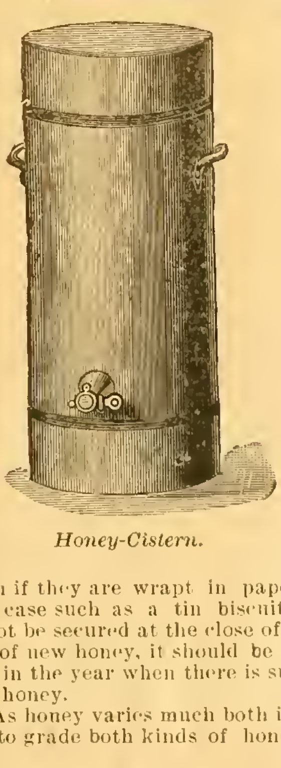
It is an undoubted fact that, as a rule, those who cry out most for markets are those who do the least to find them, or when they have got them, to keep them.

Honey, unlike many other commodities, will keep good almost indefinitely, if properly taken and stored. Queries forwarded to editors of bee-papers frequently have reference to the disposal of honey that is fussy and almost bursts the vegetable parchment covers. The best thing to do with such stuff is to throw it away, because it is useless as a food to the bees or the bee-keeper. Fermentation and the consequent spoiling of honey should be avoided by making sure that all honey, when taken from the hive, is ripe. If it is allowed to remain on the hive until there is no doubt of its ripeness, there need be little fear of fermentation. Fermentation is said to be caused in some instances by the presence in the honey of pollen-grains, but if the brood-nests are properly managed, it is seldom that pollen will be found at all in the supers.

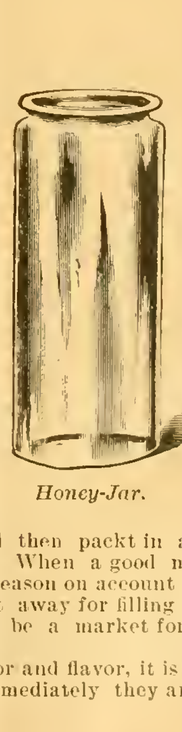
When the heat in the brood-chamber, generated by the bees, has extracted the superfluous water from the honey by evaporation, the sealing of the cells takes place because the honey is then in a condition which the bee-keeper terms ripeness. After being extracted the honey should be put into a deep cistern at the bottom of which is fitted a treacle-tap. A convenient size would be about a foot in diameter, and 2½ feet deep, unless large quantities are dealt with. The cistern should be allowed to stand in a warm room two or three days; then the ripest honey will be in the lower part, and may be drawn off into one-pound glass bottles or into 7, 14, or 28-pound tins with lever-opening lids. The bottles may be either screw-capt or covered with vegetable parchment; but the former will cost nearly twice as much as the latter. After being securely covered a nice, attractive label should be affixt on the side, giving, if possible, the source of the honey and the name of the honey-producer.

Honey sets, or candies, early or late, according to the source from which it is gathered. That from mustard and the Brassica tribe generally candies quickly, while that from clover and sainfoin usually remains liquid some considerable time, particularly if kept in a dry, warm cupboard and protected from the atmosphere. If customers prefer the honey in a liquid form it may, whether in bottles or cans, be liquefied by placing it in hot water, but it must not be boiled or it will lose the flavor and aroma distinctive of good samples of honey, and become dark and objectionable.

Sections require much care to keep them in good condition, and therefore, unless there is a good demand for honey in this form at remunerative prices, it is best to devote attention almost solely to the production of extracted honey. The removal of sections from the super is a very delicate operation as they are frequently cemented to the bars upon which they stand by propolis or bee-glue. If, by careless handling, the sections are pulled the least out of shape, the surface of the comb will be crackt and the honey will gradually ooze out, giving the cappings a damp and unattractive appearance. To command the best prices sections should be glazed—that is, a square of glass should be pasted with ornamental paper on each side. This, of course, adds to the trouble, but it pays if a good market is secured. Sections may be kept in good condition if they are wrapt in paper and then packt in an air-tight case such as a tin biscuit-box. When a good market cannot be secured at the close of the season on account of the rush of new honey, it should be packt away for filling orders later in the year when there is sure to be a market for high-class honey.



Honey-Cistern.



Honey-Jar.

As honey varies much both in color and flavor, it is advisable to grade both kinds of honey immediately they are prepared for market. The best sections will be those in which the comb is built up to the sides and filled with honey. Such sections, if also evenly and rather thickly capt, will not only be the most attractive, but they will also keep and travel best.

Markets near home are desirable, and generally friends and neighbors become ready purchasers when they find they can depend upon the quality of the honey. The next customers to whom we must turn are the middlemen in the form of shop-keepers, but all bee keepers would act wisely in joining a county association, for they would then be able to assist in the establishment of depots for the sale of members' honey. In this case it is usual to have a county label, and as each one bears a number it is an easy matter to check any attempt to lower the reputation of the county honey. Many associations have lately followed the lead of the Berkshire Bee-Keepers' Association, and been most successful in a work that is of the utmost importance to those members at least who reside some distance from towns, or fail to find a market for their produce near home.

DISEASES—DYSENTERY.

In dealing with feeding, one disease—dysentery—has already been referred to as likely to be caused by leaving in the hive a large quantity of thin, unsealed food when the colony is being closed up for winter. The disease being caused by improper food and damp surroundings need not exist except in apiaries carelessly managed. The food the bees take during their confinement acts injuriously upon them, and instead of being able almost wholly to remain in a state of comfort until fine weather gives the opportunity for a cleansing flight, they void the excrement on the combs and create surroundings that ultimately cause the loss of the colony. If found out in time the hive might be moved into a warm room so that a re-arrangement of the brood-nest might be effected. The worst combs should be taken away and destroyed, or cleansed if others cannot be supplied; then, having made their home as sweet and clean as possible, a pint of warm syrup may be given, to be followed by a good cake of candy. If kept in a warm room for the night the bees would be able to arrange their food and themselves for the out-door temperature, whatever it might then be.

FOUL BROOD.

There is, unfortunately, one disease to which bees are subject, and if it once finds lodgment in an apiary it is liable, and almost certain, to spread like wild-fire throughout the apiaries of the whole neighborhood. Foul brood (*Bacillus alvei*) is a germ disease—that is, like the diseases to which human beings are liable, it is caused by the presence and growth of a germ or seed of minute proportions. The disease is spread from apiary to apiary chiefly, if not wholly, by carelessness or ignorance in introducing colonies standing in a diseased apiary or in an infected district, that are either diseased or have in them germs that subsequently find a suitable medium in which to germinate. In those districts where the disease has not yet shown itself bee-keepers cannot be too careful in obtaining fresh swarms or colonies from districts that are known to be quite free from the disease.

The first symptoms of foul brood are only noticeable to the expert on examining the combs in the brood-chamber. The grubs, when attackt, turn a yellowish color and stretch out in their cells instead of being a pearly white and curled up at the bottom. They are then a prey to the multitude of bacilli produced from the germs,and when the nutrient matter is all consumed the bacilli die, leaving behind them innumerable germs to spread the disease whenever they fall into a proper medium.

A bad case is easily recognized by the stench arising from the hive and given off by the state of rottenness within. On examining the combs the open cells will be found to contain a dark coffee-colored substance of a stringy and sticky nature, while those sealed over will be pierced with irregular-shaped holes, and appear sunken instead of exhibiting the prominent and rounded appearance so characteristic of healthy capt brood.

With these instructions as a guide the novice should have no difficulty in detecting a case of foul brood in any of its stages. Whenever a case is found, the hive should be instantly closed and every precaution taken to prevent other colonies robbing it. At the close of the day, when the bees have about ceast work, it should be thoroughly overhauled. The best plan to adopt would be to obtain a clean hive, place in it fresh combs, if there are any on hand, then shake the bees from their frames on the alighting-board of the clean hive which should stand in the place of the affected colony. Let the bees run in, and then, if there are not sufficient frames, add to the number from another hive as many, free from signs of disease, as will compel the bees to be crowded, for under such conditions remedial measures are more likely to have a proper effect.

When the bees have settled themselves among the combs, syrup should be given which has been medicated with naphthol beta or izal. A shilling's worth of the former will be sufficient to medicate about 144 pounds of syrup. Izal should be given in the proportion of a quarter of an ounce (fluid) to 15 pounds of honey or syrup. This treatment must be carried on thoroughly in the case of every affected colony, and the result will doubtless be that in a season the apiary will be quite rid of the pest. Absolute cleanliness in the apiary is imperative. The hives from which the bees have been removed must not be allowed to stand about while they are holding diseased combs and harboring germs. The frames, combs, quilts, and other movable parts of the hives should the same evening be put upon a bonfire and not left until every scrap is consumed.

As a means of precaution against the introduction of the disease, and also to stop its progress when once it appears in a hive, an antiseptic should always be used. The best for the purpose is naphthaline—albo-carbon—usually sold in balls about the size of marbles. Two, split and dropt between the combs at the back of the hive, on the floor-board, constitute a proper quantity to be given at one time. As they disappear, which they do like camphor, they should be replaced with a fresh supply, but one dose will last a long time. The fumes given off by the naphthaline are deadly to the bacilli: therefore, if only this treatment is continued and the hives are kept scrupulously clean, the disease may be kept in check.

[Concluded next week.]

"Pickled Brood" and "Bee-Paralysis."

BY DR. WM. R. HOWARD.

These maladies have for years haunted the bee-keepers with their mysterious appearance, and ghost-like disappearance. "Pickled brood" has only recently been separated from "foul brood," and "paralysis," for years the destroyer of apiaries, remains to-day one of the unsolved problems in the way of successful and progressive apiculture. For natural reasons these diseases are not so extensive in the South as in the North.

About four years ago I kept a few colonies in my own yard, and had my first experience with "pickled brood," and in the American Bee Journal for Sept. 10, 1896, the first account of this disease was publisht. In this contribution a full natural history, including the differences between "pickled brood" and "foul brood," with illustrations and details was given. Since this was written I have carefully investigated the subsequent cases coming under my observation, and have developt, or rather discovered, other interesting and valuable facts. I find that not only the larvæ and pupæ are affected, but that many young bees hatching and crawling about for some time become afflicted and die by the thousands; and many are carried from the hive while yet alive.

Again, I have examined hundreds of old bees from the same yard and from the same hive, when there appeared to be an epidemic of destruction prevailing in certain isolated colonies—not only in the yard affected—and have found, after the most careful research (using the same strict laboratory technique practiced in bacteriological experiments), that these old bees were suffering from the same disease, so far as could be definitely determined. The spores producing the same fungus were found, and no other disease-producing element was developt. Now, that old bees suffering from this trouble has been taken for paralysis, I have not a doubt, and that many of the symptoms ascribed to paralysis by some of the writers, are so nearly in accord with those I have noticed in these cases, further evidences the fact that they have been considered identical. There is one symptom always noticed in this trouble with perfect or old bees, that is, they appear as if they had been frozen and were just able to move a foot or leg when disturbed; even young bees just hatching fall to the bottom-board unable to crawl.

There are certain conditions, in common, present, which aid in the production or development and maintenance of these diseases:

1. Old, moldy pollen in the hive.
2. The absence of fresh pollen.
3. The proper amount of heat and moisture, which always obtains in a prosperous colony.
4. Brood-rearing actively going on.
5. Cold or rainy weather, which prevents the bees from flying out.
6. A dearth of natural pollen in the fields, from late frosts or continued heavy rains.

Again, there are conditions in common conducive to health and the prevention of these troubles:

1. Clean combs, with plenty of fresh pollen in the hive.
2. Continued fine weather, with both honey and natural pollen coming in.
3. The absence of brood-rearing—a queenless colony.

These latter conditions present no pickled brood will occur, and in only extreme cases will paralysis continue. The former conditions present whole colonies will be depopulated in a few hours with either disease before anything can be done to relieve them.

In the treatment of "pickled brood" I have recommended, with the best of success, the removal of all old pollen, and if no new natural pollen were coming in, giving the bees access to sterilized artificial pollen. Unbolted wheat or rye flour thoroughly heated—not baked—makes a good substitute for pollen.

Another point worthy of special attention is access to plenty of pure water; even when brood-rearing is going on in such weather as bees are temporarily unable to leave the hive pure water will be eagerly taken from feeders, and with a sanitary benefit.

Last spring several bee-keepers wrote to me and consulted me personally in regard to paralysis; in all cases I askt that dying and dead bees be sent to me for examination. A careful study, and experiments made by removing the alimentary tract and cultivating the contents in a moist chamber, have in all cases developt the white fungus (*aspergillus pollini*) of pickled brood; and in all cases several of the above-mentioned conditions favorable to the disease were present. The removal of the old pollen, and the substitution of artificial pollen, have yielded satisfactory results.

In many cases where it was advisable to open the hives, the access to artificial pollen until natural pollen could be obtained had the desired effect. The most common cause here, last spring, was that in the very height of brood-rearing, when bees were nearly ready to swarm, a heavy frost came, killing everything green, which caused a cessation of natural pollen for ten days, in which case all the pollen in the hive was consumed; this, with a few days' confinement on account of daily rains, brought about very unsanitary conditions, causing the diseases to develop.

If any one having a case of paralysis will send me a few bees placed in a sterilized bottle, well corkt, I will gladly investigate and report the results.

502 Main St., Ft. Worth., Tex.

[We trust that our readers will avail themselves of the kindly offer made by Dr. Howard in his last paragraph, and send him samples not only of paralysis, but of any other disease that they fear their bees may be suffering from. We shall be very pleased to publish the Doctor's reports thereon. With every copy of Dr. Howard's book on "Foul Brood" that we mail at 25 cents, we also mail free a leaflet on "Pickled Brood."—EDITOR]

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No. 4.—The A B C of Marketing Honey.

BY HERMAN F. MOORE.

[Continued from page 516.]

In conversing with the people, you must avoid certain subjects. Never mention sugar syrup, for the people are all too ready to believe that many bee-keepers feed sugar syrup and sell it for honey. My answer always is, "No bee-keeper practices that." But this same thought is fired at me nearly every day.

In all trades and vocations there are things and methods that need not be given to the public. In our pursuit, the feeding of bees for winter stores, or stimulative feeding of sugar syrup in spring, and the wholesale price of extracted honey should be kept from the general honey-eating public. All the great lines of business and manufacture guard most zealously their cost prices, cost of manufacture, wholesale prices to dealers, etc. One principal reason is that the consumer can't, or won't, understand how much profit one must have to pay expenses and leave a margin. If he knows your profit he won't buy of you, for he thinks you are making too much money out of him.

The line, "I will feed you sugar syrup," that occurred in a poem in a bee-paper, never could get into a paper that I controlled.

Now for actual work among the people: Early in 1887 the writer hitcht the bay colt to the family carriage and started on his first trip selling honey to the farmers of Seneca county, Ohio. Two or three dozen jars of honey were loaded into the carriage, being packt in boxes to prevent breakage.

My first start was made by sending for a 60-pound can of the best white clover honey. This came duly to hand, and was emptied out into the jars and other dishes, by tipping up the can, and, when full, cutting off the stream of honey with a case-knife, that being, I believe, before the day of the honey-gate, or at least before I had one.

Many families were visited in this way through the farm country, and more or less sales made. I suppose the colt and I were both somewhat fractious, for I can well remember when I slapt her hard for not agreeing with me on some subject, she gave a sudden jump, lifting the front wheels of the carriage and knocking out the bottoms of several of my glass jars. That was my first big daub; but it has been continued with variations ever since, so that a dish of water and a rag are my constant companions. I mention this now, when it occurs to me, for I heartily recommend the rag and water. If you wish to live in peace with your better half and the neighbors, and if you don't wish to accumulate your neighbors' stocks of flies, don't try to do your cleaning up of honey-spills once a week, but instantly apply the rag-and-water cure when first discovered.

After following this plan for some time I became dissatisfied with it, for farm houses are too far apart, and farmers are too thrifty, and spend their money too sparingly to make good trade. Then, I was compelled to sell for a price that did not pay, owing to many farmers keeping their own bees.

By going to my county towns 10 miles away I could get 3 to 5 cents a pound more for my honey. Then instead of a quarter mile between prospective customers, I made calls almost every 20 feet. Of course, I could not well carry a load with me in the carriage and stop so often, so I naturally fell into the drummer's way of selling by sample.

Taking a quart Mason fruit-jar half full of delicious clover honey under my arm, I "made a break" for the little city of Tiffin—determined to win, or die in the attempt. My report read like the Roman's—"Veni, vidi, vici"—"I came, I saw, I conquered"—for in a very short time 800 pounds of liquid honey were sold and delivered to Tiffin families. I believe the price was 15 cents a pound, and 10 cents extra for the jar. Those were the days when Mason jars cost us $12 for 12 dozen, and were well worth 10 cents to any family.

How did I do it? Well, I took my sample jar and order-book and pencil, and started down the first street I came to, calling at every house. Then I took every street in town running that way; then, every street crossing the first lot of streets, taking every street in order. Sometimes I would make a nice sale in the last house in a row, when the temptation was to skip those, "for they won't buy anyway."

Taking the first house I came to, I went to the front door and rapt, or rang the doorbell. My mother had taught me always to be neat and clean, and I have never been mistaken for a tramp or a disreputable person. You will find, if you circulate at all extensively, that even such a thing as this may count heavily in your favor when among strangers. They must of necessity judge you at a glance by your appearance.

When the lady came to the door I said, "Good morning. Are you fond of honey? I have some here in the jar"—(holding it up and rolling it so as to show the body and clearness). "Will you please get a teaspoon and try it?"

This method of approach seemed to take a good many off their guard, so much so that some would even ask, "Are you selling it?" If I had said in the start, "Do you want to buy some honey?" 99 out of 100 would answer, "*No!*" with an emphasis.

The lady went for the teaspoon. I dipt it in the honey and gave her a liberal taste. If there were others—children, neighbors, relatives, present—I saw that each and every one had a taste of the honey. The little boy or girl saying—"Oh, mamma, ain't that nice? Get some"—has often made a sale.

Some people are skeptical, and you will find those who know least or nothing about bees and honey, are most so. Those who have had bees, or who have had honey from friends who had bees, are easy to handle. Ordinarily *they* are satisfied by the smell and taste as to the purity of your honey.

You will find the best argument in the whole catalog to use with skeptical people is, "My honey is *pure* honey. I never sell anything else. I keep bees over in Melville, 100 colonies. I take honey in July out of my own bee-hives. Come over any time and I will show you my bees, and how I get the honey away from them."

This is the best course, when you will find again and again that no words you can use will change their idea that "there is lots of manufactured honey on the market." "All liquid honey is mixt." Arguing with a man has very often had the same effect as I am told it has to argue with a man about religion—only makes him the more firm in his own belief, or unbelief.

When you start in on a town make a thorough canvass, for you may make sales when you least expect. By leaving your circulars with every one, you will make friends and acquaintances who will buy at your second or third trip.

On covering the same ground awhile after my first trip, I called where I had sold a lady some honey, expecting another order. She brought out my honey, nearly unused, and candied solid, and said, "Sugar! You cheated me; no honey." Of course I delivered a lecture on the nature and properties of candied honey, but I fear she thought I was lying, for she never made her second purchase. By all means, put in some explanations in your circulars about the nature of honey, temperature to keep it, etc.

Now here is something for you to try: After canvassing a town carefully, calling at every house, turn right around and go over the same ground the second time. My brother went over my ground after me in this way, and he said, "I can sell more honey than you can on the same ground." My answer was, "That is nothing; I got the people in the notion, and you happened along and got the order." I have repeatedly gotten orders where I supposed I had fooled my time away, when I happened to call back for some reason or another.

Right there in Tiffin, at the very start, the pretty girl told me I was "sweet enough without honey;" and another said, "It takes money to buy honey; isn't that funny?" and the same jokes have followed along all these years, even down to the present day.

To me, the work of selling honey is most fascinating. Meeting so many people, hearing their crude remarks on bees, honey, etc., giving them tastes of honey, and hearing their exclamations of delight—"Isn't that fine? That *is* honey. That *is bee* honey. My, but don't that take me back to the old farm in Pennsylvania? My uncle kept a *bee* out in Illinois when I was a child," etc. I often say, "I get my money's worth in the fun I have, and what I make is clear gain."

The only drawback of consequence in the honey-trade is, the people who eat honey are too small a percent of the whole number, and those who eat honey don't eat *enough*. This necessitates covering a wide range of territory so as not to call on the same family oftener than once in three or four months.

Those who like your honey and want more can call at your house or drop you a postal card. Perhaps it would be wise to say in your circular, "Mail orders promptly attended to."

[Continued next week.]

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Queen-Rearing—Some of the Ingenious Plans and Devices Now Employed in the Business.

BY W. H. PRIDGEN.

This article will not treat of all the ways by which queens can be reared; nor of such as work well under the most favorable circumstances, with the least labor, but, at other times, are attended with a partial or total failure. Instead, it will give a sure way of securing good ones and having cell-cups invariably accepted, whether the honey-flow is continuous, or feeding has to be resorted to, and it is suited to the rearing of a few or to queen-rearing on an extensive scale.

The preparation of the cell-builders is an important factor. To begin with, we will fill a hive with combs of brood, without bees, taking from the colonies that can best spare them, substituting empty combs or frames filled with foundation. Place this brood over a populous colony with a queen-excluder between. Ten days later remove all queen-cells, if any; give the hive-body a top and bottom, set the lower hive containing the queen off a few feet, and the other in its place. If the bees are flying freely, the queenless half will be ready to accept a batch of cells in four or five hours.

This plan has the advantage of having young bees added to the cell-builders, for a day or two, from the part containing the queen and brood, and adds much to the quality of the young queens.

When the batch of queen-cells are removed, select the next colony for cell-building; find the queen and hang the comb she is on in an empty hive near by. Set her hive off its stand, and the former cell-builders on it with an empty body over the latter. Now shake the bees from nearly all the combs in among the queenless bees; return the comb and queen, and place her hive where the queenless one stood. In a few hours, or as soon as the bees become restless, or show the queenless sign, they will be ready for cell-building. As they have no brood, we must not forget to place a comb on each side of the cells as soon as they are sealed; as it has a good effect generally and prevents the bees from gnawing off the points of the cells too soon. Besides, if this is not done, this operation cannot be repeated more than twice before laying workers will appear, and then we will have to start with a new set of combs. In fact, when the second batch is removed, the queen from the next colony to be prepared should be given to them, the bees to build the next cells shaken off on combs free from unsealed brood, and the brood placed over an excluder, as in the first case, to be used ten days later for cell-building. If one is in so much of a hurry that ten days is too long to wait, the first batch can be built by bees prepared as in the last case by forming a nucleus with the queen, or otherwise disposing of her.

Whenever the combs are to be used the second time, by exchanging places and shaking bees into the hive so as to get young ones, the brood given about the time the cells are sealed should be from over an excluder or from bees long enough queenless so that all the brood will be sealed by the time the first batch of cells mature, then it will not have to be removed. The main idea is to have bees just deprived of their queen and of unsealed brood. The cups can be given in an hour or so when they have some sealed brood.

Those who do not desire increase, but wish to rear a few queens, can hive the swarm on empty combs on the old stand, cage the queen and place her on the frames and return her to the parent colony at night.

The cells should be given as soon as they can be prepared after the swarm is hived; and when they are mature the parent colony returned to its former position, having been set back a few feet, at the time of swarming, and the swarm shaken from the combs.

No one can tell, in one article, of all of the little things connected with the manipulation of the bees or anything else about queen-rearing, but it is hoped that some ideas will be advanced that will aid others in properly varying matters according to circumstances, for no one can make a success of it unless he can do some planning and thinking for himself.

The dipping-stick should be made as shown in the illustration, and not larger than 5/16 of an inch in diameter. The tapering part should be 5/16 of an inch long; reduced rapidly for the first ⅛ of an inch and then gradually reduced to the end. It should slip into a worker-cell ⅛ of an inch before filling the mouth of the cell, form a sink in the wax-cup that will bear sufficient pressure to make the cocoon fit snugly without touching the bottom.

The stick should be dipt rather less than ½ of an inch deep into the wax, and four dips complete a cup and attach it to the bar. For the first three times hold the stick so that the drops will form and set on first one side and then the other, and thus form a foot to fit in the notches, as shown in bar with cells attacht. [See the cut on page 535.] Then loosen it up on the stick, dip again, place in the notch, and it will adhere, and not snap off when when the transfer of cocoon is made. The notches are exactly ⅝ of an inch apart from center to center, and the tin divisions in the nursery the same, so that a whole batch can be placed into it without detaching the cells.

Some may imagine that the notches in the bar interfere with the cutting off the cells when it is desirable to do so, but such is not the case, as a table-knife inserted at one side of a cell will easily pry it out. After a bar is notcht it should be mopt with melted wax, especially in the notches, before the cups are attacht. During a honey-flow the cells are joined together by the bees building wax between, but they can be easily separated with a hot knife. Any number of cups desired can be used. I usually have 18, and out of five batches built within the last few days there were only three cups rejected.

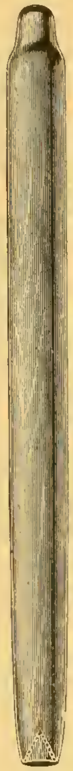
Cut out the lower half of a comb and notch the end-bars of the brood-frame even with the part left, and by having the slat or bar (I use bars ½x⅝ of an inch) just the right length they can be slipt in and out very handily.

Instead of alternating the cells, I now have them built in one straight row, so as to be convenient to insert in the nursery. If it is not desirable to remove and introduce the young queens as fast as they hatch, which I prefer doing, so as to discard such as I do not like, it will be found that the cells will be be more readily accepted if protected by the nursery until the first queen emerges.

I have not yet determined how many days in advance of hatching it will do to protect the cells with the nursery, and thus reduce the number of days of queenlessness by the cell-builders.

The comb should be quite old, such as has been used for many generations of brood; so that the cocoons that are to be transferred from will be thick and heavy, and then shaven down with a thin, sharp knife, slightly heated, so that the cells are barely ⅛ of an inch deep. It should be cut very smoothly so that there will be no ragged edges; and when bent back and forth the cocoons will loosen up, and can easily be removed. Some allow them to fall out on a piece of flannel, and then take them up, but with a properly-made transfer-stick, such as shown at the small end of the forming stick, made a little tapering, so as to stretch the cocoon a little just above the hollowed-out point, I have no trouble in taking the cocoons right out of the comb. By having cups warm (at a temperature of 90°) they stretch when the cocoon is prest in, and then a little twist of the stick makes all smooth and nice.

This plan is objected to by some because the combs have to be cut, but practice will prove that the advantages in being able to use larvæ too small to transfer otherwise, surrounded by food supplied by the bees to suit its age, will more than counterbalance the damage to combs. Besides, old ones that have been in use until they need removing can be used repeatedly during a season.



Dipping-Stick.

Cluster of Queen-Cells.

In selecting the larvæ, that used in the different sets of cups should all be of the same age, if it is expected that all will be accepted, fed alike and hatch the same day. For the best results it should not be larger than can be just seen easily with the natural eye; and many times I use it when only a tiny wet spot can be seen in the bottom of the cell. It is best after a comb is filled with eggs to give it to queenless bees, as the larvæ is fed more abundantly; especially is this the case during a honey-dearth. My experience is that there is not as much difference in the hatching of the queens as there is in the age of the larvæ used; and unless surrounded with an abundance of food, one larger than the head of an ordinary pin produces a black-tipt, runty queen.

If it be desirable to form nuclei, a hive can be filled with combs of brood (sealed and hatching preferred) and placed under the cell-builders when the cells are sealed. In any of the cases mentioned, when the cells mature slip them in the nursery described on page 535, or any nursery you have convenient, and as soon as enough young queens hatch, form nuclei by using a comb of honey and one of brood, giving each a queen. Place them in a dark room one day for them to become accustomed to their changed condition, when most of the bees will remain, when the nuclei are set out; especially so if the weather or conditions have been such that they have not flown freely for several days.

If only one batch of cells is to be built, and the first arrangement be used, when the nuclei are formed as described above, the hive over which the first brood was placed can be set in its former position, and it will be seen that a batch of cells has been built, and a number of nuclei formed without stopping a queen from laying or removing her from her hive.
—Bee-Keepers' Review. Warren Co., N.C., June 22.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Why the Brood Was Present.

We had a small colony of bees in a soap-box and wanted to transfer them. July 11 and July 14 they swarmed; 21 days after the first swarm issued we transferred them, but on opening the soap-box we found about a dozen small queen-cells, and also brood from the eggs to be sealed. What is the reason of all the brood being in the hive at the time?

"FRED."

ANSWER.—Twenty-one days after a prime swarm issues, there will be found no worker-brood present, as a rule. But it is quite possible that the swarm which issued July 11 was not a prime swarm. One thing that looks like it is that a swarm issued only three days later, and generally a second swarm is at least a week after the prime swarm. It is quite possible that a prime swarm issued about July 3, and the two swarms you report both had young queens. In any case, there was probably left in the hive a young queen of about the same age as the one that left July 14, and if she began laying any time before July 24, there would be eggs to sealed brood present Aug. 1, or 21 days after the first swarm you report. The small "queen-cells" present were probably the remains of cells in which the young queens had been reared, which cells are not entirely removed at once, if indeed ever.

Pickled Brood—Ventilating a Bee-Cellar—Wintering, Etc.

1. Will you please give me some information on a disease called pickled brood? I have several colonies that have the disease. I treated one colony as follows:

I shook the bees off of their frames into a hive containing frames with starters, and melted up their former combs into wax. I have several colonies that have only a very few cells affected with the disease. Is there any way to cure the disease without destroying their combs? A colony that has the disease seems to do nothing—only just live—that is, if it is affected very badly. In strong colonies it seems to disappear by spells, and then reappear again.

I noticed the disease first in the spring. I thought perhaps it was neglected brood, or chilled brood, as we had a cold, backward, rainy spring. But clover bloom was good and bees did well. Basswood bloom was good, and buckwheat now is first-class.

Perhaps, Doctor, you have not had any experience with the disease called "pickled brood." I will explain how it works in my apiary: The larvæ die in the cell usually after they are full grown. Then they gradually shrivel up and dry down in the cell, and the bees clean them out.

2. I am thinking of putting in some ventilating-tubes to my bee-cellar. Would you ventilate from the top or bottom of the cellar? My reason is this: The combs mold some on the lower side. I thought perhaps I could ventilate so as to take out the dampness.

3. Do you think that, as a rule, a queen ought to lay the eggs for a colony over two seasons? Or is it best to let the bees attend to their own business about queens and replacing them?

4. How would it do to clean the bees all out of honey as soon as the buckwheat flow is over, and feed them up for

winter on granulated sugar—say 25 pounds of sugar to each and water according to rule—and do the feeding about Sept. 1, for inside wintering?

5. How is buckwheat honey for inside wintering of bees? White honey granulates in the comb quicker than buckwheat.

6. There is a bee-keeper a short distance from me that says it is foolish to have bees go into winter quarters with so many bees in a hive. He says he wants only 2,000 bees and a queen in the hive when winter comes, as they consume less honey. I dumpt five colonies into one hive and saved the best queen last fall, and they did not consume any more honey than the rest of my other colonies, and they did the business this season, you may be sure. What do you think about a few bees in a hive, and the queen, to go into winter quarters?

NEW YORK.

ANSWERS.—1. The only knowledge I have of pickled brood is what I have read. On page 419 of the American Bee Journal for 1897, E. S. Lovesy says he has treated the disease by sprinkling a good handful of salt on the bees.—[See page 530.—EDITOR].

2. Probably it doesn't make any great difference whether the ventilator works from the top or bottom of the cellar, only so the air of the cellar is changed. If convenient, let the ventilating-tube start from the bottom of the cellar. It should go into a chimney or be in some way arranged that there will be a draft. In perhaps all cases there is enough inlet for fresh air through the cracks and crevices of the wall without making any special provision for entrance of air, if only there is draft enough to take it out. The worst time to get up ventilation is on warm days and nights in spring, when the temperature of the cellar is the same as that of the outer air. At such times the only thing—or perhaps the best thing—is to open doors and windows wide at night, closing them up next day as soon as the bees show signs of flying out.

3. Opinions are divided. If you kill all your queens when two years old, replacing them with queens equally good, your bees will probably do well. And perhaps they will do just as well if you leave the matter in their own hands. The latter plan is certainly the least trouble.

4 and 5. Buckwheat honey is very good for wintering and so is granulated sugar, and it's doubtful if you would get any pay for your labor if you empty out the buckwheat and feed sugar.

6. Some years ago there was something of a sensation made by a Mr. Hosmer about killing off all but a small number of bees in a colony, but the matter died out, and little has been said about it lately. I think the theory was that the older bees died before spring any way, and there was no use putting them into winter quarters. You can easily try the experiment. About the first of September on a warm day move a colony to an entirely new location. The old bees that fly out will not return to the hive, and thus you will have only the younger bees. It's a good plan to unite several weak colonies, in the fall, but you may overdo it, for no matter how strong the resulting colony, when the harvest comes you will have only the progeny of the one queen. If you unite three weak ones, making one strong one, that one strong one may do more than the three weak ones would have done. If, however, you unite six, making twice as strong a colony in the fall, you will have no stronger colony for the next harvest than you would from uniting the three.

Bees Playing—Comb or Extracted.

1. My bees come out and fly around in front of the hive, go back in and make lots of noise as if something was wrong. Oftentimes when one colony quits another one begins. What is the cause?

2. Which is the most profitable, super for comb honey? or two and three-story hives for extracted honey?

3. Which will the bees work in the best, two-story frame hives or pound boxes? My wife wants pound boxes, and I want two-story hives.

IDAHO.

ANSWERS.—1. If the weather is fair enough, you will probably find that each colony has a daily play-spell, when the young bees that fly for the first time and the house-keeping bees take a fly for exercise. They will be flying very busily at one hive, the bees flying much of the time with their heads toward the hive, taking little circles close to the hive and gradually getting farther away; then after a time they will quiet down and other colonies will be at it.

2. For some places and for some bee-keepers comb honey is best. For others extracted. If that were not so, you would hardly find one man working entirely for comb honey and another for extracted, as is the case at present.

3. It is easier to get bees to work in extracting supers than in sections or pound boxes. It is generally believed that you can get considerably more extracted honey than comb, but comb generally brings a better price. It is considered a matter that requires more skill and experience to get comb than extracted. If you are not certain which is best for you, it may not be a bad plan for you to try both. Indeed, some of the best bee-keepers think it's a good plan to combine and work for both. Moreover, it is not to be wondered at that a good house-keeper should want some nice section-honey to grace her table, considering the difference in looks between that and extracted.

Unfavorable Experience with the Bee-Escape.

I got a Porter bee-escape and fixt the escape-board according to directions. Somehow the bees uncap the honey before they pass through the escape. As I tried the escape-board on two hives, with the same result, I put it under a super in the evening, and took the super off the next morning. The bees were all out of the super, but the capping was gnawed off. Please let me know what's the reason, and if such honey is fit for sale.

ILLINOIS.

ANSWER.—It is possible that your bees have a large proportion of black blood in them, for when black bees are frightened they seem to attack the first spot they come to on the combs to fill themselves with honey, tearing holes in many places of the capping, while the Italians are more deliberate, and hunt around for unsealed cells from which to load up. Even with black bees there ought to be no uncapping unless the bees get too much frightened. The remedy, of course, is to put on the escape without exciting the bees, and, as soon as you can, get Italian blood.

It is not often that bees, on leaving the super, gnaw holes enough in the capping to materially hurt the sale. Of course it is mainly a matter of looks, and the more nearly perfect a section is the better it will sell.

Bees Affected with Some Disease.

I bought 10 colonies last spring in a good, healthy condition, apparently, as they were handled by an experienced beeman last season, and I got a man of some experience to take them and care for them. They did splendidly during the forepart of the season, putting out some good, strong swarms. After they had ceast to work on basswood, he took two frames of old comb out, and put in two frames of foundation, thinking to get them all on foundation. He then placed the combs in the top of the hive, to feed back to them, and he thought they had begun robbing, and thought he had traced it to one swarm; so he closed the entrance to the hive with wire screen (a chaff hive) during the day, and at night they had all smothered, and the combs all melted down. We moved the hive some distance away, and let the bees have free access to it. Now he thinks two colonies have foul brood, as there seems to be dead brood in the combs.

What is it? and what was likely the cause? Also, how should we treat it? Could they have contracted any disease from the dead brood of the smothered colony? Or, if it is foul brood, could they contract the disease from bees in the vicinity?

MICHIGAN.

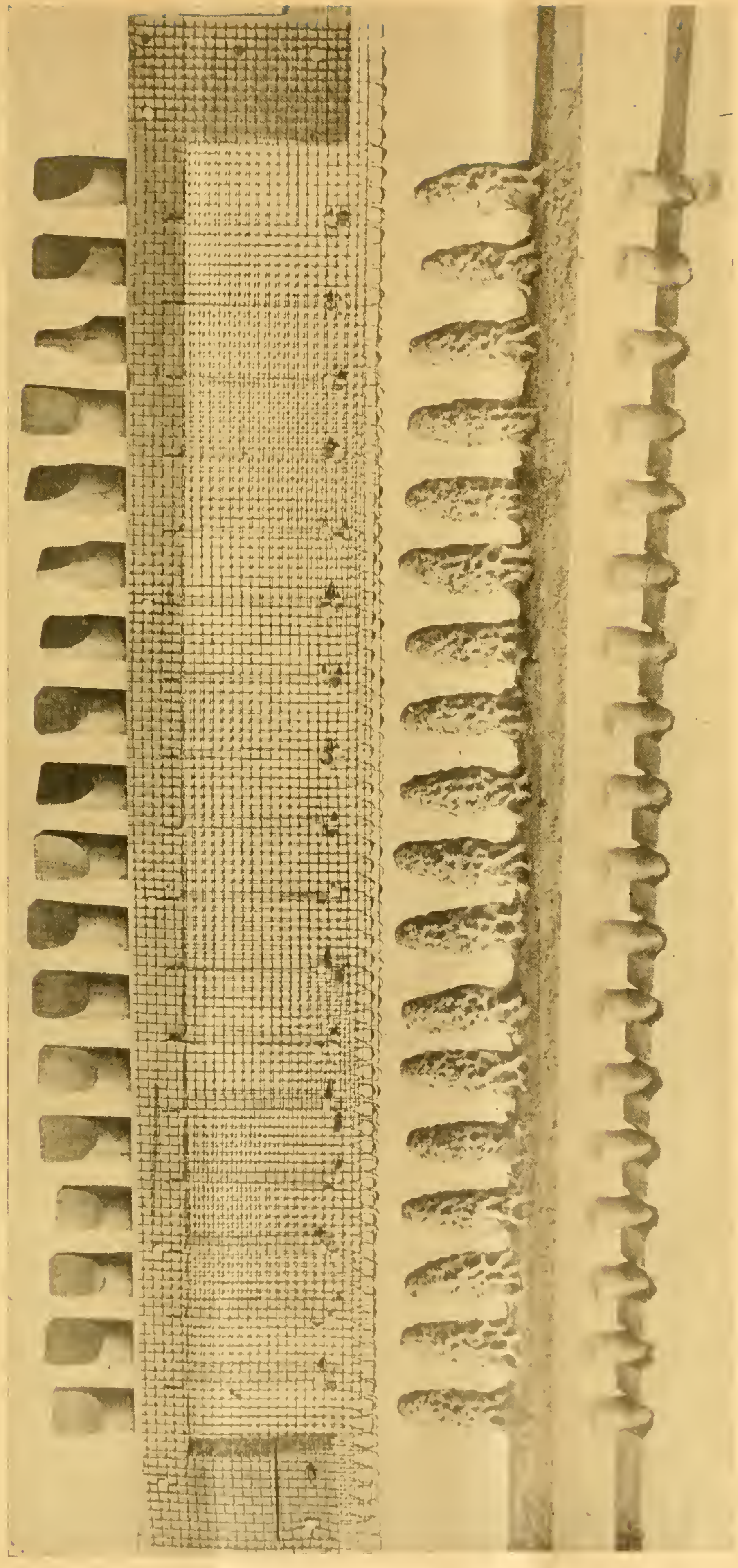
ANSWER.—Foul brood is such a terrible disease, and the risk of danger from it so great that it will well pay every bee-keeper to be thoroughly informed upon it. Get Dr. Howard's book and fully post up. The expense is trifling, and may save much. What can be given in the small space here allowed must be very unsatisfactory compared with the information given in a book wholly devoted to it. Foul brood might easily be contracted from affected colonies in the neighborhood, indeed, just as far distant as bees would fly to rob. It is hardly likely the bees contracted any disease from robbing, unless it was foul brood. [We mail Dr. Howard's booklet on foul brood for 25 cents.—EDITOR.]

Bees Have Foul Brood.

I have about 20 colonies of bees, and almost all, if not all, have foul brood. I have had bees 21 years, and never saw any foul brood before. What would you recommend for a cure?

WINDSOR.

ANSWER.—You probably can do no better than to use the McEvoy treatment as recommended and described in Dr. Howard's book on foul brood. If you have not the book, by all means get it at once. In a matter of so much consequence it pays to be as fully informed as possible.



Cell-Cups, Completed Cells and Queen-Nursery, as used by W. H. Pridgen—From the Bee-Keepers' Review.

Modern Queen-Rearing.

BY W. Z. HUTCHINSON.

Queen-rearing has kept pace with the other strides made in the apicultural line; and it is doubtful if any queen-breeder uses any more advanced methods than those employed by Mr. W. H. Pridgen, of North Carolina. He also furnisht the originals from which the accompanying engraving was made. The process of dipping the cell-cups is described on page 532.

After the cups are attacht to a stick, as shown in the illustration, they are supplied with just-hatcht larvæ, using the small, concaved end of the forming-stick, whereby the larva can be pickt up, cocoon and all, and deftly transferred to the bottom of the cell-cup. This is "taking up the baby without waking it up," as somebody called it.

After the cells are supplied with larvæ, the stick is fitted into a frame from the lower half of which the comb has been cut away, and given to a queenless colony. How these cells appear after the bees are through with them is well shown in the engraving. Isn't this away ahead of the old way, where the bees went at it to suit themselves [as shown on page 533], where it is almost impossible to save all of the cells?

Before the cells are ready to hatch they are placed in the nursery. This is done without so much as detaching them from the stick. They are all an even distance apart, and this distance just equals the distance between the tin divisions in the nursery, so that the cells can be lowered all at once into the nursery, and each cell has a little apartment all by itself. If a queen hatches it can do no damage, and it can find food in the shape of soft candy placed in a depression or cavity in the top of the wooden plug that closes the lower part of each little cage. The queens are safe and well cared for here until needed to put in nuclei.

It would seem that so far as securing virgin queens is concerned, we had pretty nearly reacht perfection. The great cost, however, of rearing queens, is in getting them fertilized and laying—the nuclei and bees cost much more than the queens.

When this part of the business is cheapened and simplified to the same extent as has been done with that of cell-building and queen-hatching, queens may be sold for a "quarter"—I guess. Some attempts have been made in this direction by having small frames, section honey-boxes, for instance, for nuclei, and massing them on top of a colony of bees so that they may derive warmth from the colony; but such methods have never come into general use. It is clear to me that there would be some disadvantages.—Editorial in Bee-Keepers' Review.

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

PUBLISHT WEEKLY BY
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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

Place and Date of Next Meeting:

Omaha, Nebr., Sept. 13, 14 and 15, at the Delone Hotel, Cor. 14th Street and Capitol Avenue.

VOL. 38. AUGUST 25, 1898. NO. 34.

EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

"Feeling is something that magnifies the sting of a bee about five thousand times." So says a daily newspaper. That editor probably has "been there."

◆

Small Crop and Higher Price.—Judging from the many reports as to the crop of honey this year, it must be quite small. As Mr. P. H. Elwood, of New York State, says in the following letter, the price of honey should be considerably higher in consequence of its scarcity:

> "The crop of white honey here is small. A communication from your largest firms in Chicago states that the price will be materially higher, owing to the general short crop, and to the fact that prices recently have not been proportionate to the cost of production. This last is true, indeed, and should be emphasized by every bee-paper and honey-producer in the United States.
>
> P. H. ELWOOD.

◆

Fences and Plain Sections are very strongly endorst by Messrs. O. P. Hyde & Son, of Texas, in Gleanings for July 15. Here is what they say about them, after giving them a good test, having used the plain-tall sections in the experiment:

> MR. EDITOR:—We beg leave to report on those plain sections and fence separators. This spring we bought 35 supers of the Ideal kind, with plain sections and fence separators. They were bought as a trial, and put to a test, and we are pleased to say they have stood the test very satisfactorily. We ran several colonies with them at one of our apiaries. The colonies were good average ones, as near like the other colonies at the apiary as possible. The bees went to work in the plain sections sooner than in the old style; and, would you believe it, up to the present time these colonies with the plain sections have produced twice as much as those with the old style. This is not guesswork, but facts, as careful records were kept, and we are ready to verify what we say. The only reason we can assign is that the plain sections and fence separators gave more perfect communication.
>
> As to the character of the honey, we will say we did not have a single bulged or washboardy section. The honey came to about 1/12 inch of the wood; and, coming so close, it made a pretty section of honey. It was advanced in the spring—that owing to the fact that the honey would come so close to the edge of the wood that it would be easier to get broken or bruised in handling than the old style. We thought the same; but after handling them filled with honey we must say that they are less apt to get broken in handling than the old style.
>
> O. P. HYDE & SON.

◆

Minnesota Fair Apiarian Premiums.—Mr. J. P. West, the superintendent of the apiarian department of the Minnesota State Fair, desires us to call the attention of the bee-keepers in that State to the very liberal premiums offered, as shown by the following list:

	1st.	2d.	3d.	4th.
Most attractive display and best quality of white clover comb honey	$12	$10	$5	$3
Most attractive display and best quality of basswood or linden comb honey	12	10	5	3
Most attractive display and best quality of extracted white clover honey	12	10	5	3
Most attractive display and best quality of extracted basswood or linden honey	12	10	5	3
Most attractive display and best quality of fall comb honey	12	10	5	3
Most attractive and finest display of comb honey	10	6	4	3
Most attractive and finest display of extracted honey	10	6	5	4
Most attractive and finest display of comb honey, not less than 20 pounds, and the manner of putting up for market considered	8	5	4	3
Nucleus of Italian bees and queen	6	4	3	2
Collection of different races of queens	6	4	3	2
Beeswax, not less than 10 pounds, soft, bright, yellow to have the preference	5	3		
Honey-vinegar, not less than one gallon, to be exhibited in glass	3	2		
Largest and best variety of uses that honey may be applied to, illustrated by individual samples of different things into which it enters; cakes, pastry, meats, etc	10	5		
GRAND SWEEPSTAKES.				
Largest, best, and most attractive exhibition in this department, all things considered	15	8	5	3

The 39th annual Fair and Exposition of the Minnesota State Agricultural Society will open Sept. 5 and close Sept. 10. The bee-keepers have a meeting on the Grounds, commencing Wednesday morning. It is earnestly hoped that all who can do so will make a special effort to be present.

For any further information, address J. P. West, Hastings, Minn.

◆

Rules for Awarding Apiarian Premiums.—Mr. S. H. Herrick, of Winnebago Co., Ill., having been appointed judge of the apiarian exhibits at their county fair, requests the re-publication of the rules for awarding apiarian premiums adopted by the Illinois State Bee-Keepers' Association, and which have been in successful operation at the State fairs of Illinois held at Springfield in 1896 and 1897.

For Mr. Herrick's benefit, as well as others of our readers who may be selected as judges at the fairs this fall, we give the Illinois rules referred to above, as follows:

RULE I.—Each entry shall be scored upon its merits in each and every respect in which it can be scored, according to the formulas given below.

RULE II.—The entry which is best in any respect shall be taken as the standard and be scored the highest number of points allowed in that respect, and all other entries competing for the same premium shall be markt in proportion to their merits when compared with the standard.

RULE III.—Entries ranking equally in any respect shall be scored equally in that respect.

RULE IV.—The entries scoring the highest aggregated number of points shall receive the premiums in their respective order.

RULE V.—The awarding judge shall mark all scores on the score cards furnisht for the purpose, and shall leave the said score cards with the said scores markt upon them, with the Secretary of the State Fair Association.

RULE VI.—The standard package for comb honey shall be sections holding about one pound.

RULE VII.—The standard color for beeswax shall be a pale yellow.

RULE VIII.—Every exhibitor who enters honey-plants shall furnish a correct list of their common names to the awarding judge.

RULE IX.—All nuclei which do not contain queens shall be barred.

RULE X.—All plants that are not recognized honey-plants shall be barred from the exhibit.

RULE XI.—All bees and queens shall be on public exhibition from 9 a.m. until 4 p.m. each day of the Fair, and failure to comply with this rule shall bar the exhibit from competition, or shall cause the exhibitor to forfeit the premium.

RULE XII.—Upon the affidavit of two or more exhibitors the Superintendent of this department shall order the withholding of any premium which has been forfeited according to these rules.

RULE XIII.—The standard marking for bees shall be as follows:

1. Dark Italian bees shall show three distinct yellow bands.
2. Golden Italian bees shall show four or more yellow bands.
3. Carniolan bees shall show rings of gray hairs on the abdomen.
4. Cyprian bees shall show at least three yellow bands, and an orange-colored spot on the thorax.
5. Albino bees shall show at least three light yellow bands and a ring of white hair on the abdomen.
6. Black bees shall show plain black abdomens.

SCORE CARD.

Class——— Lot——— Bees and Honey———

Premium No.——— Entry No ———

COMB HONEY.

Quantity [pounds]	40
Display—arrangement and attractiveness	20
Flavor	10
Condition of the capping [free from travel-stain and water-soakt appearance]	15
Completeness of the capping	5
" " filling	5
Uniformity of the comb	5

EXTRACTED HONEY.

Quantity [pounds]	40
Display—arrangement and attractiveness	20
Flavor	10
Variety of kinds of honey	5
Clearness of color	5
Body	5
Style of package	5
Variety "	5
Finish "	5

GRANULATED HONEY.

Quantity [pounds]	40
Display—arrangement and attractiveness	20
Flavor	10
Solidity	5
Variety of kinds of honey	5
Fineness of grain	5
Style of package	5
Variety "	5
Finish "	5

BEESWAX.

Quantity [pounds]	40
Display—arrangement and attractiveness	20
Purity	20
Color [pale yellow]	20

NUCLEI OF BEES.

Color and markings	60
Condition	10
Brood—all stages	10
Neatness of hive	10
" comb	10

QUEEN-CELLS.

Quantity [number]	40
Markings	30
Condition	10
Variety of strains	10
Display—arrangement and attractiveness	10

HONEY-PLANTS.

Quantity [number]	60
Display—arrangement and attractiveness	20
Mounting	20

Burlington Route

This Route is the one to take when attending the convention of the United States Bee-Keepers' Union, to be held at Omaha, Nebr., Sept. 13, 14 and 15. The editor of the American Bee Journal will go on this road—the Chicago, Burlington & Quincy—leaving Chicago at 5:50 p.m., Monday, Sept. 12, and arriving in Omaha at 8:10 o'clock the following morning—two hours before the opening session of the convention.

We would be glad to have as many as possible go with us on that trip from Chicago, and all along the line of the "Burlington Route." If desired, we will reserve sleeping car accommodations for all who will notify us in advance, and make such other arrangements as you may wish.

It would be pleasant to go in a special car from Chicago, and that can be secured if there are a sufficient number that can get together so as to start from or near Chicago. The round-trip rate will not be more than $14.75 from here to Omaha.

Don't forget that the "Burlington Route" is the one to take to Omaha if you possibly can.

◆

Buying Honey for Home Demand.—On account of the short honey crop in many localities this year, in order to keep the home demand well supplied many bee-keepers will have to purchase honey from some other part of the country, where they have been fortunate enough to have a surplus for sale.

During the past year or two we have been trying to furnish bee-keepers with extracted honey—both alfalfa and basswood—and many have availed themselves of the opportunity to purchase for their home trade when they failed to secure a crop, or after having disposed of all their own surplus.

We do not see why such an arrangement is not only a good thing for those getting their supply from us, but also for the bee-keepers from whom we have bought. Being a cash deal all around, there is no dissatisfaction on that score, as is often the case when honey is sold on commission. More and more we are coming to believe that the cash business is the only proper thing. Then each party to the transaction knows exactly where he stands, and just what he is to get for his money or honey.

We shall be glad to furnish extracted honey to those in need of it, and would refer them to the advertising columns for prices, etc.

THE WEEKLY BUDGET

DR. MILLER'S HIVE-COVER—that we mentioned on page 504—is not a "ventilated" one, as we unintentionally called it. It has a dead air space—at least, that is the Doctor's aim.

MR. R. C. AIKIN, of Larimer Co., Colo., reported thus, Aug. 11:

"Bees are still gathering honey, and I think now I will have at least 15,000 pounds. That would be an average of about 50 pounds.

MRS. WM. DUNN is a prominent and wealthy Chicago lady who owns one of the most ideal country places and ranches imaginable, near Tacoma, Wash. The Daily Ledger of that city for May 15 contained a very interesting description of it, mentioning the fine young orchard with its 1,500 Italian prune trees, 250 apple trees, 70 pear, 70 cherry, etc. Mrs. Dunn has 15 colonies of bees there, and she tells us that their "honey from white clover is most delicious." We haven't a doubt about it. Mr. Thos. Topping is the experienced English gardener and bee-keeper who has the care of Mrs. Dunn's extensive interests near far-away Tacoma.

MR. W. H. PRIDGEN, of Warren Co., N. C., has been called "A Queenly Deceiver." This will be no surprise to any who see the kind of queens he sends out. We have a sample before us, and she is a beauty in appearance—a rich, golden yellow. And the bees accompanying her are just as sunny looking.

MR. M. P. FICHTENMAYER, of Bristol Co., Mass., who has sent us several new subscribers, wrote us Aug. 13:

"I don't recommend the American Bee Journal in order to get the premiums you offer, but for what it is worth to any bee-keeper, which is more than just the dollar it costs for a whole year. It saved me more than that besides other information I have out of it."

ONTARIO AGRICULTURAL COLLEGE.—The following is the report of the Department of Apiculture, kindly sent us by a subscriber in Toronto:

"THE APIARY.—The season has been a good one for honey, bees swarming early, and in some neighborhoods excessively. The supply of nectar was profuse, especially from clover, but basswood yielded little, and latterly there has been a scarcity by reason of the dry weather. The average yield will be nearly 50 pounds per colony, and there has been a good increase in colonies."

PAGE FENCE AGE is the name of a monthly 4-page paper issued by the Page Woven Wire Fence Co., of Adrian, Mich. It is sent free to any farmer asking its publishers to place his name on their mailing list. The Page fence has been advertised in the Bee Journal regularly now for about two years. We presume many of our readers have that fence on their farms or places of residence.

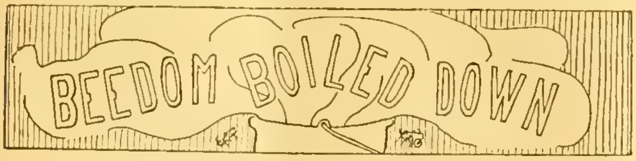
By the way, should you ever write to the Page Woven Wire Fence Co., please tell them you saw their name in the American Bee Journal.

JOINT MEETING—WIS., IOWA, MINN.—Mr. Harry Lathrop, of Browntown, Wis., sent us the following, Aug. 13:

FRIEND YORK:—At the last convention of the Southwestern Wisconsin Bee-Keepers' Association a committee was appointed to arrange for the next annual meeting, and it was suggested that we arrange to hold a joint meeting of our association and those nearest to us in Iowa and Minnesota. North McGregor, Iowa, was mentioned as a good place for holding the meeting. As I do not know the names and addresses of the officers of those Associations—in Iowa and Minnesota—I would like to have them write to me.

Our people think it would be real nice to hold such a joint meeting, and we would like to know what the others think about it. If you will kindly publish this letter in the Bee Journal it may aid us in getting together.

Yours truly, HARRY LATHROP.



Bees Carrying a Queen.—G. Gross reports in Gleanings that he found a swarm on the ground with a clipt queen. As the nearest bees were 200 yards distant, he thinks the bees must have carried her there. The wary editor doesn't commit himself as to his opinion in a foot-note, but it is probable that he is responsible for the heading, which reads, "Do bees carry the queen when swarming?"

* * *

The Market Problem.—Under this title a discussion has been started in the American Bee-Keeper that bids fair to occupy considerable space. Messrs. Jolley and Doolittle are disputants-in-chief, and wheat, leather trust, speculator Leiter, unearned charges, and other things are thrown into the discussion with a lavishness bewildering to a common bee-keeper. Evidently the editor has some fear that some of the every-day bee-keepers may not understand all the talk, and may object to taking up room with it, for he commences a foot-note by saying, "So far from introducing a foreign subject, we regard this discussion as dealing directly with fundamental principles," and he promises if the brethren express their minds freely on the subject he'll put in some extra pages for practical bee-talk while the discussion is on.

* * *

Clipping Queens.—With a pair of very small scissors Mr. Aikin follows the queen as she walks on the comb, and when he gets one of the blades under the wing he snips. Doolittle catches the queen by the wings, holds her an inch or so above the frames, and with the small blade of a pocket-knife, made very sharp, cuts off the wing, letting her drop on the frames.—Progressive Bee-Keeper.

* * *

Bee-Spaces of Italians and Blacks.—Some difference of opinion has developt in Gleanings as to the space bees will leave between two opposing surfaces of sealed honey, or between the comb and an adjoining surface of wood. The editor says ¼ and J. E. Crane says 3/16. It transpires that the difference of opinion *may* be caused by the difference in bees, Italians having the larger space, and blacks 3/16.

* * *

Prevention of Increase.—Here's C. Theilmann's plan as given in the American Bee-Keeper: Let the bees swarm naturally; when a swarm issues, cage the queen, lay her at the entrance, and let the swarm return. The queen may be left at the entrance a week or more. Usually a young queen will have hatcht by the seventh day, but whether she has or not, all queen-cells are cut out and some of the ripest laid at the entrance, for the bees to care for, and the first one hatcht will reign, the others being killed. The old queens are killed if not needed elsewhere.

* * *

Introducing Valuable Queens.—G. M. Doolittle says, in the American Bee-Keeper, that he doesn't lose one queen in 50 by following the instructions for introduction that are sent out by queen-breeders when they mail queens, but that one in 50 may happen to be one of most value, so when he has a valuable queen to introduce he takes another plan, a plan he has now followed for more than 15 years without a single failure. With wirecloth he makes a cage that will hold a brood-comb, at each end the cage having a piece of wood 2 inches wide, 3/16 thick, and ⅛ inch longer than the depth of the frame. A cover is made so that when a brood-comb is fastened in it no bee can get in. Into this cage is put a frame of hatching brood with no unsealed brood, the queen and her escort are put in, and the frame thus caged is put in the middle of any colony strong enough to keep it warm, the caged frame taking the place of two frames. In five or six days, when the cage has plenty of young bees, the frame is put into an empty hive in a new place with a frame of honey, as a nucleus. Frames of hatching brood may be given to hurry matters.

* * *

Large vs. Small Entrances.—The editor of Gleanings has been fomenting a quarrel between G. M. Doolittle and Dr. Miller as to the size of entrances, Dr. Miller maintaining that a colony in a hive raised half an inch or more on four blocks is less likely to swarm because cooler. Dr. Miller had his inning in the number for June 1, and no reply came till August 1. But Mr. Doolittle was not keeping still for nothing, and now comes with testimony gathered direct from the bees, and plainly says he expects to drive the Doctor from the "arena," and then annihilate the arena itself. He had 10 colonies with usual entrances and 10 others of equal strength with the entrance enlarged after the Pettit plan, measuring 15x1½. Three of the colonies with large entrances swarmed before any with the common entrance did.

He says that not only does the large entrance all around do no good, but it does harm, for the bees can easily keep the hive cool with a 15x½ entrance. With the large entrance all around, aggregating 60 square inches, the *fanners* have no power to send the heated air circulating all about the combs and hives, while they *do* have such power with the ½-inch entrance. "And why the bees come out of the hive on hot days is so that they will not be so much in the way of the circulation of the air caused by the fanners, and not because it is cooler outside, for in reality it is cooler inside."

Every Present Subscriber of the Bee Journal should be an agent for it, and get all other bee-keepers possible to subscribe for it. See premium offers on page 539.

FOR THE READERS OF THE AMERICAN BEE JOURNAL.

PROFITABLE BEE-KEEPING,

—WITH—

HINTS TO BEGINNERS.......

By Mr. C. N. White, of England,

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

Mr. White is owner of one of the largest apiaries in the country where he lives, and has made a life study of the subject. He is also lecturer, under the Technical Education Scheme, to several County Councils in England. He will treat the subject in a

Series of Nine Illustrated Articles:

1. General and Introductory. 4. Swarming. 7. Supering.
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This is a series of practical articles that bee-keepers of the United States will not want to miss reading. They will appear only in the AMERICAN BEE JOURNAL.

We want our present readers to begin at once to get their neighbor bee-keepers to subscribe for the Bee Journal for the last six months of 1898, and thus read the articles by Mr. White. In order that all may be able to take advantage of this rare opportunity to learn from a successful and practical English authority on bee-keeping, we will send the American Bee Journal for

The balance of 1898 for only 40 cents—
To a NEW Subscriber—thus making it

SIX MONTHS FOR ONLY FORTY CENTS—

Which can be sent in stamps or silver. If you are a subscriber already, show the offer to your bee-keeping neighbors, or get their subscriptions, and we will give YOU, for your trouble, your choice of ONE of the following list, for each NEW 40-cent subscriber you send:

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1 Wood Binder for a Year's Bee Journals
2 Queen-Clipping Device
3 Handbook of Health—Dr. Foote
4 Poultry for Market—Fan. Field
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7 Capons and Caponizing—Field
8 Kendall's Horse-Book
9 Mullen's Horse-Book
10 Foul Brood—by Dr. Howard
11 Silo and Silage—by Prof. Cook
12 Foul Brood Treatment — by Prof. Cheshire
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15 15 "Honey as Food" Pamphlets
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For Sending TWO New 40-cent Subscribers:

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2 Green's Four Books
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4 Dr Tinker's Bee-Keeping for Profit
5 40 "Honey as Food" Pamphlets
6 Winter Problem in Bee-Keeping—by Pierce
7 Hutchinson's "Advanced Bee-Culture
8 Dr Brown's "Bee-Keeping for Beginners"
9 Bienen-Kultur—German
10 Bees and Honey—160 pages—by Newman
11 People's Atlas of the World

All New Subscriptions Begin July 1.

Please remember that all the above premiums are offered **only** to those who are now subscribers, and who will send in new ones. A new subscriber at 40 cents cannot also claim a premium.

Now, let every one go to work, and help roll up the largest list of subscribers the old American Bee Journal ever had. It can easily be done if ALL who possibly can get a few new subscribers will kindly do so.

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

GENERAL ITEMS

Harvested a Fair Crop.

I have had a very busy summer with my bees. They have harvested a fair crop of white honey, but unless we have rain soon, there will be no fall honey here. I have some very fine white honey but it is selling slowly.

I am much interested in the new Union, and will send Mr. Secor my dollar for membership fee as soon as honey gets to selling a little faster.

I will give the report of my honey harvest later. The Bee Journal comes promptly every Thursday, and is ever welcome. MRS. PAUL BARRETTE.
Crawford Co., Wis., Aug. 11.

Not a Bad Report.

My bees have retrieved themselves somewhat this year. I have taken off 109 pounds from three colonies so far, which is not bad, considering the number of bees in this locality.
L. T. CHURCHILL.
Cheboygan Co., Mich., Aug. 11.

Very Light Crop.

I am located in a good honey-producing locality, and generally the bees find plenty of forage, but this year I will have to mingle my voice with the complaining, for the honey-crop has been

Be It Known

To all Men, we are prepared to fill orders promptly for

CHOICE QUEENS of the best strains of Golden or Leather-Colored Italians....

Tested $1 00; Untested—one, 75c; three, $1.50. After July 1, 50c each Remit by Express Money Order, payable at Barnum, Wis. One and two-cent stamps taken. Address,

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If you care to know of its Fruits, Flowers Climate or Resources, send for a Sample Copy of California's Favorite Paper—
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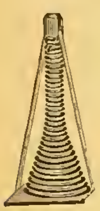
IF YOU WANT THE —BEE-BOOK
That covers the whole Apicultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his
Bee-Keeper's Guide.
Liberal Discounts to the Trade.

Nickel Plate Excursion to Boston.
Tickets on sale for trains leaving Chicago Sept. 16 to 18, inclusive, at rate of $19.00 for the round-trip, and good returning until Sept. 30. Also cheap rates to all points East. Vestibuled sleeping-cars to Boston, and solid train to New York. Rates lower than via other lines. For further information call on or address, J. Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone Main 3389. (60-32-6)

DR. PEIRO,

CENTRAL MUSIC HALL, CHICAGO.

Please mention Bee Journal when writing.



Queen-Clipping Device Free

The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

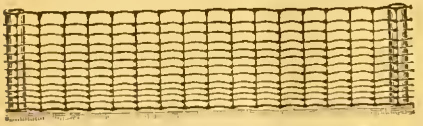
Geo. W. York & Co., 118 Mich. St., Chicago, Ill.

OUR PRICES are worth looking at. We are making the new

Champion Chaff-Hive

with dovetailed body and supers, and a full line of other Supplies, and we are selling them CHEAP. A postal sent for a price-list may save you $$$$

R. H. SCHMIDT & CO.,
Box 187 SHEBOYGAN, WIS.



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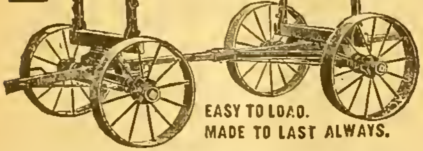
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MADE TO LAST ALWAYS.

Our perfect knowledge of this wagon and the quality of material used in its construction leads us to declare it to be the NEATEST, STRONGEST, MOST DURABLE, LONGEST LIVED, EASIEST TO LOAD wagon made. Has our famous straight or stagger spoke

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has a hobby which is the sheep breeder and his industry, first foremost and all the time. Are you interested? Write to-day

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small so far. During the basswood season the flow of honey was good, but since then the bees have not stored as much as they have consumed.

From 175 colonies I have taken some 1,500 pounds this season, and it is all nice honey, but many of the colonies are light, and will need much more honey to winter on. They swarmed freely this season, sending out big swarms which gained in weight rapidly, but everything has come to a standstill all at once. We have had plenty of rain and there seems to be a great many wild flowers in blossom.

B. M. BULLARD.
Clark Co., Wis., Aug. 11.

Has Been a Poor Season.

The season has been a poor one thus far, but if the weather and rains continue during the summer the next season will be a good one, as white clover is coming up everywhere.

LEININGER BROS.
Putnam Co., Ohio, Aug. 11.

Extremely Poor Season.

The season for honey has been extremely poor in this locality. I was obliged to feed the bees just at the time that white clover ought to have been doing its best.

H. G. QUIRIN.
Huron Co., Ohio, Aug. 12.

Honey Like Lubricating Oil.

I have taken off a small quantity of honey—a mixture of white clover, basswood and honey-dew—looking more like oil that has been used for lubricating iron shafting than anything else I can think of; and of course totally unsalable. Very poor season this, yet I feel satisfied, for I'm paid as the days pass.

I look with interest for the arrival of the American Bee Journal each week and usually finish reading it at a sitting. I am anxious to know, you know, what the "old bee-cranks" have to say, even if I don't believe it all.

WM. M. WHITNEY.
Kankakee, Ill., Aug. 12.

About Drowned Out.

Bad weather. All rain—three inches the last 24 hours. We were about drowned out before then.

HENRY ALLEY.
Essex Co., Mass., Aug. 12.

A Light Honey Crop.

The honey crop in this locality is light and quality not very good—no distinctly white clover or basswood, but a mixture of almost everything. S. H. HERRICK.
Winnebago Co., Ill., Aug. 12.

Bees Doing Well, Etc.

My bees are doing well this year. I have taken 60 pounds of surplus honey to the hive, up to date. Our honey crop doesn't come in till July. We get our most and best honey, alfalfa, as sweet clover has but just got started in this part of the country. We also have the American bee-weed here, but the bees do not work on that much this year.

There are quite a number of bee-keepers here, but they do not want to take any bee-paper. They expect to make a success in the business by the experience and knowledge of their neighbors, and if one doesn't come up to

Sweet Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Sweet Clover (white).	.60	$1.00	$2.25	$4.00
Alsike Clover........	.70	1.25	3.00	5.75
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Crimson Clover.......	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, wanted by freight.

Your orders are solicited.

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Queens, Bees and Bee-Keepers' Supplies

Tested Queens in April and May, $1.00. Untested, 75c. Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

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SEE THAT WINK!

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Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Cat. free. **Walter S. Pouder,**
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QUEENS

Is of H. G. QUIRIN, of Bellevue, Ohio.

Ten years' experience with the best of methods and breeders enables him to furnish the best of Queens—Golden Italian—Doolittle's strain—warranted purely mated, 50c; 6 for $2 75. Leather Colored same price. Safe arrival. No postage stamps wanted. 23A16t

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Practical Hints" will be mailed for 10c. in stamps. Apply to—

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Meeting of Sovereign Grand Lodge, I.O.O.F., Boston, Mass., Sept. 19 to 24, Inclusive.

For this occasion the Nickel Plate Road will sell tickets at rate of one fare for the round-trip. Tickets on sale Sept. 16 to 18, inclusive, good returning until Sept. 30, inclusive. For particulars, address J. Y. Calahan, General Agent, 111 Adams Street, Chicago, Ill. Telephone Main 3389. (59-32-6)

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Finest Alfalfa Honey!

IT SELLS ON TASTING.

The Honey that Suits All Who Buy It.

We can furnish **White Alfalfa** Extracted Honey, in 60-pound tin cans, on board cars in Chicago, at these prices: 1 can, in a case, 7 cents per pound; 2 cans in one case, 6½ cents; 4 cans (2 cases) or more, 6 cents. The Cash MUST accompany each order.

☞ A sample of the honey will be mailed to an intending purchaser, for 8 cents, to cover postage, packing, etc. We guarantee purity.

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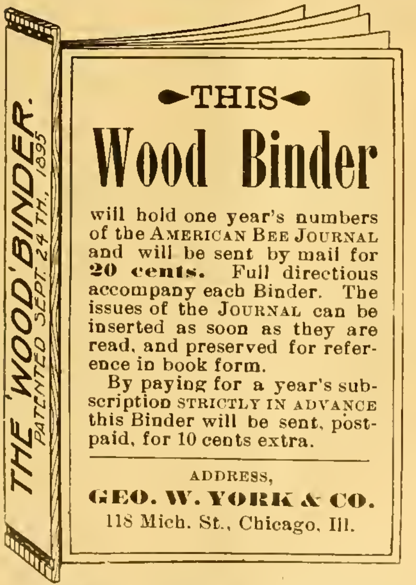

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QUEENS Pure Italian—3 or 5-banded. Untested, 50c each. Parties wanting ½ dozen or dozen lots will do well in writing for wholesale prices. I have 700. Can send by return mail. **DANIEL WURTH,**
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Golden Italian Queens Cheap!

Two-frame Nucleus, with Queen, $2.25.
If you want **BEES FOR BUSINESS,** send for my Catalog of prices.
18Etf J. F. MICHAEL, Greenville, Ohio.
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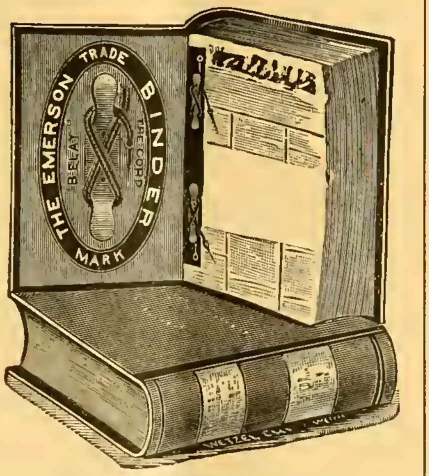

This Emerson stiff-cloth-board Binder for the American Bee Journal we mail for 60 cents; or will send it with the Journal for one year—both together for $1.50. It is a fine thing to preserve the copies of the Bee Journal as fast as they are received. If you have the "Emerson," no further binding is necessary.

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A Special Booklet Bargain!

For a limited time we wish to make our readers a **special offer** on booklets on Bees, Poultry, Health, etc. Upon receipt of **75 cents** we will mail any **6** of the list below; and **for $1.25** we will mail the **whole dozen**·

1. Foul Brood, by Dr. Howard	25c
2. Poultry for Market and Profit	25c
3. Turkeys for Market and Profit	25c
4. Our Poultry Doctor	30c
5. Capons and Caponizing	30c
6. Hand-Book of Health, by Dr. Foote	25c
7. Kendall's Horse-Book	25c
8. Rural Life	25c
9. Ropp's Commercial Calculator	25c
10. Foul Brood, by Kohnke	10c
11. Silo and Silage, by Prof Cook	25c
12. Bienen-Kultur, by Newman	40c

PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y.
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their ignorant ideas they will drop him quick and run after me, and stop me in my work. But it is very provoking to have such neighbors. You mention paper to them and they will tell you that if they can't make a success without a paper they will quit the business.

JOSEPH A. LEWIS.
Navajo Co., Ariz. T., Aug. 12.

Too Dry—No Nectar.

No nectar here. I have five colonies—one with three supers, one with the second, and three with supers untoucht. It has been too dry, but it is better now.

J. P. BLUNCK.
Webster Co., Iowa, Aug. 14.

Rather Discouraging.

We are having the poorest honey year in this vicinity that was ever known, so old bee-keepers tell me. I have not had five pounds of honey in one of my hives since before June 1. It is rather discouraging to a beginner like myself, but I will hope for a better season next year. It is so dry that no honey was in the flowers.

H. F. STRANG.
Van Buren Co., Mich., Aug. 10.

Has Very Little Honey.

Honey of any kind is very scarce in this part of the country. I have 175 colonies of bees, but have very little honey.

W. C. NUTT.
Hardin Co., Iowa, Aug. 15.

Don't Forget

the excursion to Boston over the Nickel Plate Road, Sept. 16 to 18, inclusive, at rate of $19.00 for the round trip. Good returning until Sept. 30, 1898, inclusive. Tel. Main 3389. (61-32-6)

Minnesota.—The adjourned meeting of the Minnesota Bee-Keepers' Association will be held on Wednesday forenoon during State Fair week, at the place where the honey exhibit is made on the fair grounds. Make an effort to be there, and invite other bee-keepers who are not members to come and join the Association.

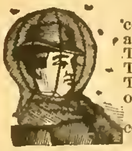
L. D. LEONARD, Sec.
Minneapolis, Minn.

California.—The next meeting of the Fresno County Bee-Keepers' Association is to be held in the City Hall, Fresno, Calif., Wednesday, Sept. 14, at 10 o'clock a m. All honey-producers are requested to attend.

Caruthers, Calif. W. A. H. GILSTRAP, Sec.

Globe Bee Veil

By Mail for One Dollar.



Five cross-bars are rivited in the centre at the top. These bend down and button to studs on a neck-band. The bars are best light spring steel. The neck-band is hard spring brass. The netting is white with face-piece of black to see through.

It is easily put together and folds compactly in a case, 1x6x7 inches, the whole weighing but 5 ounces. It can be worn over an ordinary hat; fits any head; does not obstruct the vision, and can be worn in bed without discomfort. It is a boon to any one whom flies bother, mosquitos bite, or bees sting.

For sending us only TWO NEW subscribers to the Bee Journal for one year (at $1.00 each) we will mail to a regular subscriber one of these Globe Bee-Veils; or, for $1.75 we will send the Bee Journal one year and the Veil to any address.

GEORGE W. YORK & CO.,
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HONEY ❋❋❋

If you want Colorado Alfalfa, Sweet Clover and Cleome honey—comb or extracted—correspond with the Secretary of the Colorado State Bee-Keepers' Association. Our Honey ranks high in quality. Car lots a specialty. Address **F. RAUCHFUSS, Elyria, Colo.**

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Best Basswood Honey in Barrels ❋❋❋❋

We have a limited number of barrels of **very best Basswood** Extracted Honey, weighing NET about 280 lbs. which we are offering at 7 cents per lb. f. o. b. Chicago. Do you want a barrel or so of it? If so, address, with the cash,

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BEES, HONEY, MONEY

Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

J. P. H. BROWN, Augusta, Ga.

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FOR SALE.

The Midland Central Apiary and fixtures to be sold. This season's honey crop—just taken off—is 25,700 pounds, or nearly 13 tons. Satisfactory reasons given for selling. For further particulars apply to

R. A. MARRISON,
33A2t **Inverary, Frontenac Co., Ont.**

BEE-KEEPERS! Let me send you my 64-page Catalog for 1898
J. M. Jenkins, Wetumpka, Ala.

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For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 25 cents per pound, CASH. No commission. Now if you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

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CHICAGO, ILLS.

Excursion to Boston.

The Nickel Plate Road will sell excursion tickets from Chicago to Boston and return for trains of Sept. 16, 17 and 18, at rate of $19.00 for the round trip. Tickets will be valid returning until Sept. 30, inclusive. On account of heavy travel at this particular time, those desiring sleeping-car accommodations should apply early to J. Y. Calahan, General Agent, 111 Adams St., Chicago. Telephone Main 3389. (58-32-6)

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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Aug. 18.—The new crop is now coming forward and meets with a fair demand. Best grade of white comb honey in 12 to 24 section cases, 12c; that which is faulty, 10 to 11c; ambers, 8 to 10c; dark, 7 to 8c. Extracted, 5 to 7c for white; 5 to 6c for amber; 4 to 5c for dark. Beeswax, 27c.

R. A. BURNETT & CO.

Kansas City, Aug. 11.—Fancy white comb, 13@14c; No. 1, 12@13c; amber, 10@12c. Extracted, white, 5½@6c; amber, 4½@5c. Beeswax, 22@25c.

The receipts of new honey are very [illegible] demand fair. C. C. CLEMONS & CO.

New York, July 30.—There is some little new Southern comb honey on the market, mostly irregular quality and selling at from 9 to 11c. Extracted of all kinds is in good demand. Common grade Southern, 50 to 52c per gallon; good, 55 to 57c.; choice, 5 to 5½c. per pound; some exceptionally fine lots sell at 6c. Beeswax is very quiet at 26 to 27c.

HILDRETH BROS. & SEGELKEN.

Boston, July 9.—Fancy white in cartons, 13c.; A No. 1 white in glass-front cases, 11 to 12c.; No. 1, 10 to 11c; No. 2, 8 to 9c. Extracted, white, 6 to 7c; light amber, 5 to 6c. Beeswax, pure, in good demand with very light supply, 30c.

At the present time the demand for both comb and extracted honey is very light with but little stock on hand.

BLAKE, SCOTT & LEE.

San Francisco, Aug. 10.—White comb, 9 to 10c; amber, 7 to 8½c. Extracted, white, 6@6½c.; light amber, 5½ to 6c. Beeswax, 23@25c

Although stocks are very light, the quality of this year's crop is of a much higher average than was generally expected, considering the dry season. There is some of this year's product which is of exceptionally fine quality. Market is firm at quotations.

Detroit, July 21—Fancy white, 11@12c; No. 1, white, 10@11c. Extracted, white, 5@6c; dark, 4@5c. Beeswax, 25@26c.

New honey is arriving, but prices are hardly establisht. M. H. HUNT.

Minneapolis, July 26.—Fancy white clover comb is now selling at 11@12c.; amber, 10½c. Extracted fancy white clover, 5½c.; amber, 4¾@5c. Dark grades, both comb and extracted, not wanted at low prices.

S. H. HALL & CO.

Indianapolis, July 18.—Fancy white comb honey, 12@12½c; No 1, 10@11c. Extracted, white, 6@7c. Beeswax, 25@27c.

Only a few arrivals of fancy white comb; market almost bare, and demand good. Quite a little comb honey from honey-dew is being offered, but there is simply no demand for the stuff. WALTER S. POUDER.

Milwaukee, Aug. 18.—Fancy comb, 11 to 12c; A No. 1, 10 to 11c; No. 1, 9 to 10c; amber, 7 to 8c; old and dark, 5 to 6c. Extracted, white, in barrels or kegs, 5 to 6c; dark, 4 to 5c. Beeswax, 25 to 26c.

The market for honey is in very good condition; while there is yet a little of the old crop on hand, it is in very good order, and some demand, which will clear off everything before the new crop will arrive, very plentifully. There is already some receipts of new, but mostly extracted, and some very good quality, yet we fear the danger is in extracting too early, before the honey is fairly ripened. We anticipate a good demand a little later, and think values will remain about the same as present quotations. A. V. BISHOP & CO.

Buffalo, Aug. 12.—Fruit prevents a large demand for any kind of honey at present. A few cases of fancy one-pound new comb can be sold daily at 11@12c.; but any grade below must be urged at proportionately lower prices. Would advise writing us before shipping here. There is no demand yet for extracted BATTERSON & CO.

St. Louis, July 9.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

WESTCOTT COM. CO.

Cleveland, Aug. 3.—Fancy white, 13@14c; No. 1, white, 12@12½c; light amber, 11c; buckwheat, 9c. Extracted, white, 7c.; light amber, 6c.

The demand for honey is exceptionally good, owing to the crop in this vicinity being very light. A. B. WILLIAMS & CO.

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38th Year. CHICAGO, ILL., SEPTEMBER 1, 1898. No. 35.

Burlington Route

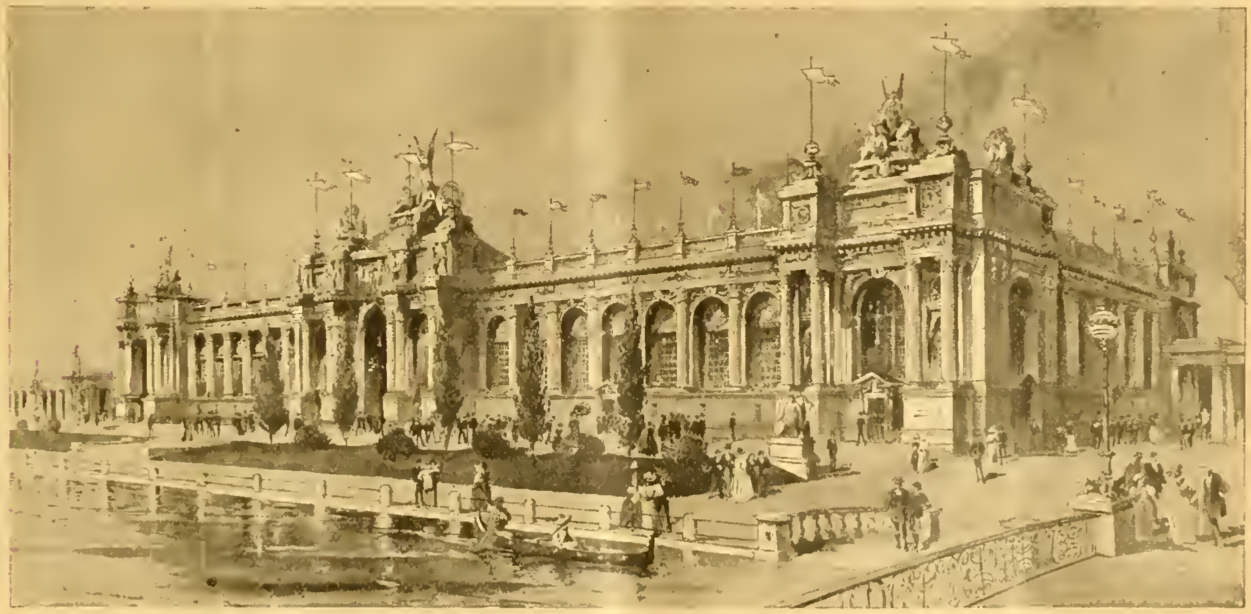
This Grand Route (Chicago, Burlington & Quincy) to Omaha and the great West, is almost too well known to need any explanation from us. But we wish our readers to know that it is the road that bee-keepers east of Omaha will be pleased to take when attending the annual convention of the United States Bee-Keepers' Union, Sept. 13, 14 and 15, at Omaha. The editor of the American Bee Journal, with all that can join him, will leave Chicago over the C. B. & Q. at 5:50 o'clock p.m., Monday evening, Sept. 12, and arrive in Omaha at 8:10 o'clock the next morning—about two hours before the opening session of the convention. We wish that the bee-keepers from here might fill a special car. It can be arranged if all who will accompany us will notify us in advance. The round-trip rate on the C. B. & Q. will not be over $14.75 from Chicago.

While Omaha already has been exceedingly well advertised, we may say that it is the metropolis of half a dozen States. The population tributary to it in Nebraska and the States which touch her borders, exceeds 9,000,000 all told. This is called the Trans-Mississippi area, and gives name to the exposition. Omaha has a population of 145,000, chiefly American born. It lies on a high plateau, overlooking the valley of the Missouri River, which at this point is over two miles wide. The view of the river valley from Omaha is most impressive. The city proper is on a gently undulating plane, which at the north end develops into a stretch of prairie as level as a kitchen floor. Here is the site of the Trans-Mississippi Exposition. It is approacht by three wide sweeping avenues, with an extensive system of steam and trolley lines, quite adequate to any demand that is likely to be made for transportation. The scene which greets the visitor challenges the admiration of every one. The mighty arch, suggestive of the 24 participating States, fronts the collection of massive buildings and forms a most imposing gateway. It is modeled upon the design of the great arches of Paris and Milan and crowned by a colossal shield, supported by two stalwart genii, with the nation's eagle percht aloft.

Within, the scene necessarily reminds one of the Court of Honor at the Chicago Exposition of 1893. An artificial canal or lagoon stretcht for half a mile between two rows of majestic edifices. At its western end this canal widens out into a lake, the sides of which describe a perfect trefoil. This has been well named "The Mirror," and facing it, looking down along the lagoon, stands the great Government Building, capt by an heroic figure of Liberty Enlightening the World. From the Government Building, reaching along either side of the lagoon, and all connected, are the buildings devoted to Agriculture, Administration, Mines, Machinery, Arts and Liberal Arts and Manufactures. Across Sherman Avenue, and reacht by a viaduct, are the individual buildings of the States, the Horticultural Building and the streets of foreign villages.

An interesting feature of the exposition is the American Indian Department, under the direction of the United States Indian Commission. Representatives of almost all the tribes in the country are campt on the broad piece of prairie apportioned them. There they have pitcht their tents, built their fires, and live their wild life for the benefit of the multitude.

Realizing that visitors come to the exposition for pleasure as well as instruction, the management have been very active in developing the amusement section. Attractions of all kinds have been gathered together, surpassing in some respects the famous "Midway" itself. Moorish, Irish, Tyrolean and Chinese villages have been establisht, and Old Vienna, Old English Country Fair, Hagenbeck's Animal Show, Wild West, etc., are some of the many features.


Agricultural Building at the Trans-Mississippi and International Exposition, at Omaha, Nebr.

CONTRIBUTED ARTICLES

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PROFITABLE BEE-KEEPING,

WITH

HINTS TO BEGINNERS,

BY

C. N. WHITE, OF ENGLAND.

Author of "Bees and Bee-Keeping," "Pleasurable Bee-Keeping," etc.

No. 9.—WINTERING.

Every spring reports from all parts of the country deal with extensive losses of colonies. The ordinary observer may be excused if he infer from such accounts that as losses usually occur early in the spring wintering is a subject of difficulty, and a great stumbling-block to the great majority of bee-keepers. As a matter of fact, the losses are, I venture to assert, due in nine cases out of ten to absolute carelessness or neglect, tho oftentimes the result of ignorance as to the bees' requirements in the shape of food. It is not so much that bees require in the winter proper, as the consumption of food then by a strong and well protected colony is comparatively small; but it is rather when breeding has commenced in earnest that stores rapidly diminish; and this is in March and April, just before new honey is brought into the hive in quantity sufficient to supply the daily wants of the bees and the ever-increasing number of hungry grubs.

To winter bees successfully is not a difficult matter in the British Isles, but it is one of the most important problems that the bee-keeper has to face, and if he can solve it, as he may and should without difficulty or expense in time or money, he will have got one step, and a big one, too, nearer that success in bee-keeping we hear much about but seldom realize in our own apiaries.

A colony properly wintered should come out in the spring stronger in bees than it was when closed up early in October the previous autumn, instead of being, as colonies too often are, weakly and thin in numbers throughout the spring. Sealed stores should also remain in such quantity as will ensure the colony having a sufficient supply to carry it well on to the time when the new honey comes in abundantly. The requirements of success are: (1), a good, substantially-made and weather-proof hive; (2), a good colony of bees, by which must be understood that there are several seams of bees between the combs instead of two or three, and that the bulk of them are bees that have done little work, being in fact such as have been brought into existence by the system of feeding resorted to from the close of the honey-flow. Some lots are permissible sometimes, but only when young queens are being preserved to take the place of any that for any reason have died during the winter. If these small lots are confined to about three frames, and are well packt, they may in case the queens are not required for other colonies, be built up into really good colonies in time to take advantage of a late honey-flow; (3), combs well stored with honey or syrup, and sealed; (4), winter passages and abundance of covering to the frames.

If colonies are carefully tended from the close of the honey-flow to Oct. 1, and the above conditions observed, strong, vigorous colonies may be assured the following season.

THE HIVE.

Dealing with each point in order, we must first consider the hive. It is a fact that a single-walled hive costs less than one with double-walls, but it certainly is not more economical. By using hives with double walls all around we shall find the colony better protected both from winter cold and summer heat than would be possible with single-walled hives. We can regulate the temperature in summer by ventilation, but without double walls we cannot give that protection in winter which is of the first importance when we deal with the consumption of stores. The novice or beginner in bee keeping should therefore score one point in successful wintering by starting with double-walled hives. The wood should be pine or red deal well seasoned and thoroughly painted. In winter color is of little importance, but in summer a reflection, not absorption, of heat is required. Mr. A. I. Root, the noted American bee-keeper, said some years ago that he had stopt the melting and falling of combs, and in some cases the consequent loss of bees, by painting all his hives white. I strongly advise white, or a light stone-color paint for the hives.

THE BEES.

As at the beginning of the honey-flow a large quantity of worker-bees is necessary if full supers are to be obtained, so at the commencement of winter we must make a point of getting and then keeping all colonies strong.

If there are weak lots unite two or more together after removing the least valuable queen. To unite, shake both or all lots on a cloth and let them run together into an empty skep, where they had better remain until evening. Then shake them in front of a hive that has been properly prepared for wintering. The bees of two lots may be united peaceably by sprinkling them thinly with flour from a dredger and then placing the frames with adhering bees alternately in a fresh hive. The stronger the colony in bees the less is the honey consumed. This appears strange, but it is quite true; a small lot of bees in a hive containing several combs are restless, with the consequence that they consume honey to raise the temperature lowered by the cool air surrounding them.

The food supply may be ample owing to a particularly favorable season after the supers have been removed, but even if feeding has to be resorted to very little time will be needed to perform this part of the work. In order to obtain young bees for wintering a supply of Puerto Rico sugar, given at the close of the honey-flow, will probably be all that is necessary to continue breeding up to the middle of September, when whatever further supply is needed to make the colony safe for the winter can be given in the form of syrup in one or two doses. No colony should be considered safe unless it has stored in the combs at least 20 pounds of honey or syrup and sealed most of it over. The arrangement of this food is a matter of some importance, for if the bees are crowded upon a few frames and fed liberally they will fill every available cell with syrup, and then they will be compelled to cluster during the winter upon sealed combs instead of upon empty cells, as is more natural, and having stores above and around. With the movable-comb hive the arrangement of the combs for wintering is, in the hands of a good bee-keeper, a simple matter; but if feeding is continued up to the middle of September, and the proper amount of food is then given, the bees will arrange it around the brood, which gradually diminishes by the bees hatching, conveniently for their comfort and convenience. If the combs are arranged by the bee-keeper, the center ones should have sealed stores about half-way down, the amount of stores increasing to the outside of the brood-nest.

WINTER PASSAGES.

Bees often starve in the midst of plenty. They winter in lots called "seams" between the combs, and may be seen packt like slates upon a house-roof, the top row removing the food from the cells above them to feed themselves, and by passing it down, those below. While the weather remains mild the bees are able to move about from comb to comb in search of food, or with the object of bringing to the center combs food stored in the outer frames; but this activity ceases as soon as really cold weather sets in and they then pack themselves close together for mutual warmth. Then, as the food around them is consumed, they die simply on account of the cold air by which they are surrounded; they cannot pass around or under the frames to a probable abundant supply close by. Tho they are prevented going around or under the frames a provision may be made for allowing them to pass over the top-bar in the warmest part of the hive. This is done by giving what are known as "winter passages." The old method, now almost discarded, was to cut a hole through the comb in each frame near the top-bar. A more effective passage could hardly be devised, but apart from spoiling the combs it is a tiresome and troublesome operation, and is therefore not recommended. A simple plan is to lay across the top-bars four pieces of wood half inch square and about six inches long, half inch apart. If the quilts are then laid evenly across, effective passages for the bees will be provided. Then again a cake of candy laid upon the frames when closing up the hives in October will be equally satisfactory, for passages will be formed as the candy is consumed over the bars.

QUILTS.

Quilts are the coverings which the bee keeper places upon the frames in order that the heat generated in the brood-chamber may be there confined. The less bees are disturbed the better are they likely to succeed, but at no time is it more necessary to protect them from disturbing influences than during winter. This matter may be tested by placing under observation two colonies as nearly equal as possible on Oct. 1. No. 1 being in a single-walled hive, and the frames covered with a single thickness of calico or ticking: while No. 2 is placed in a double-walled hive and covered with an abundance of woollen wraps or chaff cushions, in addition to the first quilt of calico or ticking. Presuming both colonies to be alive on Feb. 1, the following year, a great difference in their condition will then be perceptible. No. 1. which has been scantily protected from low winter temperature, will show stores greatly diminisht, which, if the bees are owned by a careless bee-keeper, might cause the loss of the colony altogether later on when breeding is in progress. No. 2, on the contrary, owing to the protection of the brood-nest, would be little disturbed by weather, and consequently the bulk of the food stored the previous autumn would remain for use in brood-rearing. Under ordinary circumstances the bees of a colony in a normal condition are said by an eminent authority to consume only about 1¼ ounces of food per day during their period of inactivity.

The necessity, therefore, for conserving the heat in the brood-chamber is evident; and the importance of double-walls and coverings of non-conductive materials is recognized. But as a preliminary to packing the bees up snugly for their winter rest, the size of the brood-nest should be limited to the size of the cluster; for instance, if there are only bees to cover six frames in September, it is folly to allow them nine or ten, or even more. It is seldom that more than seven or eight frames are necessary for an ordinary colony, and the removal of superfluous frames should be the first step to successful wintering, so that the space in which cold air can circulate may be reduced as much as possible, with a view to lessening the activity of the bees, and the consequent consumption of stores. It is from all points of view better to unite two or more weak colonies in the autumn than to allow each to stand and take its chance with or without a lot of coddling, unless it is to preserve valuable queens.

The first quilt should be of ticking, because it is a stout substance not easily bitten through by the bees. Upon the first quilt two or three pieces of felt or carpet must next be placed; and then, to make doubly sure, a chaff cushion might be added.

Any colony prepared according to the directions here given will, as a rule, pass satisfactorily through the winter and be in an encouraging condition when taken in hand the following season. (THE END.)

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Wax-Spoon for Fastening Foundation, Etc.

BY DR. C. C. MILLER.

Some time ago I received a letter containing a spoon used for putting foundation in sections and frames. Before replying to it I waited until I had given it a fair trial, not that I think I can afford to try every new thing that appears, but this spoon—if an almost flat piece of tin can be called a spoon—lookt rather promising. It is a very simple affair. A piece of tin 6 or 8 inches long and an inch or more wide has one end cut off at an angle of 45°, and commencing perhaps ⅛ inch from the point each side has a little curve cut out, making it look just a little after the shape of a steel pen. It is folded or bent a little for holding the wax. But let me give the letter:

> MY DEAR DR. MILLER:—I have read your valuable suggestions now more than three years with much profit. I now feel that a small return should be made, and I enclose you a wax-spoon for fastening foundation in sections. Some time ago my plan of putting in foundation was illustrated in the American Bee Journal. You suggested at that time that too much wax might be used in attaching; the enclosed spoon will hold enough melted wax (which must be quite liquid) for two sections. With skillful manipulations 200 an hour can be filled with top and bottom pieces—never a top piece drops down or bottom (¾) one curls down.
>
> Really you must excuse me, but I have been much concerned about you as twice I have seen you advise neophytes (when they askt how to fasten foundation) to take fragments of wax and make a candle with a piece of cord (how mussy that must be), and so make bold to send you my device. To complete the equipment a small oil or alcohol lamp and a 4 inch tin pan in which to melt the wax, are necessary. One pound will do two or three thousand sections and brood-frames for 20 hives. My top-bars have ⅛-inch saw-kerf instead of 5-16 I see you recommend in one of your articles. Why 5-16?
>
> Can't we do something for Editor York? His reform spelling will surely ruin the "Old Reliable." After reading the American Bee Journal I am all "masht" up when reading other papers. I have not "learnt" (Webster learned) to tolerate it, and will be obliged to give up the paper with all your valuable pointers. Can't you prevail on him to give up attempting to reform the language orthography?
>
> This has been a bad month for bees; my colonies, which were booming, are now dying off rapidly, and the first white clover blooms in sight. Fraternally yours,
>
> Passaic Co., N. J., May 27. B. F. ONDERDONK.

The first opportunity I had of trying the spoon was when putting foundation in a lot of brood-frames. I had used for the same purpose a spoon, and also a tin cup with a specially constructed spout, and latterly a wax candle. I may say to you, Mr. Onderdonk, that you can't always tell till you try a thing just how it will work. I couldn't be sure just how your spoon would work, just by looking at it, and altho you say of the candle, "How mussy that must be," if you were expert at using it you would not find it very mussy. I think it was rather less so than either of the plans I had previously used. Only one drop falls at a time, the temperature is always just at the right point, but unless you are careful the one drop may not fall just in the right place. It has the advantage that it takes little time to get ready. Simply light your candle, and it's ready for work, and if there's only a short job to do, I'll be all through with the candle while you're heating the wax for the spoon.

I had some 200 brood-frames in which to fasten foundation, and I thought I would be polite to the stranger—the new-fangled spoon—by giving it the first chance. I found that sharp point would enter an angle nicely, it could be held much closer in the angle than an ordinary spoon, giving a chance to send it to the right place every time. Indeed, it workt so well that I went right over to the enemy and finisht up the whole lot without lighting the candle. I doubt if ever I shall use a candle again. The Onderdonk spoon ought to be on the list of bee-keepers' supplies.

As to using it for fastening foundation in sections, that's another thing. If you should put in a few thousand starters with the Daisy foundation fastener, I doubt if you would go back to the spoon. Aside from anything else, the spoon plan is more expensive. A lamp is burning in either case, so the expense is alike in that respect. A Daisy fastener will last long enough so that a cent a thousand sections for cost of machine will be an extravagant estimate. To offset that you have about 10 cents a thousand for wax with the spoon plan. But if melted wax is to be used at all, the Onderdonk spoon will be a great help.

AGAIN THE REFORM IN SPELLING.

With regard to reforming Editor York in the matter of spelling, I'm afraid you're going at it in the wrong way. It's only a very mild form of insanity at most, but don't you know that you only make such cases worse by threatening pecuniary loss? Once get it into the head of a fanatic of that sort that he is suffering loss for what he believes is right, he at once feels the thrill of a martyr for the truth, and the case is hopeless. I, too, should be sorry to witness the ruin of the "Old Reliable," but he will glory in it and take a pride in telling how much smaller is his subscription list now than when he began the spelling reform.*

After all, I doubt whether there will be any very large number whose prejudices are so strong that they will forego the knowledge they can gain for the sake of a little matter of looks. If you and I met a man who was well informed in some particular of bee-culture, we wouldn't refuse to listen to him because one word in 50 was mispronounced. And if we could get him to write to us, I think we would hardly refuse to read his letter because he told how he "workt" his bees instead of how he "worked" them. I doubt whether there can be found a large number of bee-keepers so given up to blind prejudice that they would seriously object to having one word in a thousand spelled as it sounds rather than as they have been accustomed to see it.

If you and I object to changing a spelling to which we are accustomed, then some older man will object to some earlier change, and if the rule works in one case it ought to in another, resulting finally in going back to an old spelling that would land you and me where we couldn't read a sentence of the English language.

We may as well give up to the inevitable. It's only a question of time when "workt" instead of "worked" will be used by all. It is reasonable to suppose it will be so, from the history of the past. I don't recall a single change in the way of improved spelling but has become permanent. Only a short time ago a few began to write "program" instead of "programme," but gradually all are falling into line with the new spelling. Many now living remember when honour, labour, Atlantick and Pacifick appeared in the spelling here given. Of course there were those who opposed any change in the spelling, just as there are some who object now to putting "t" in place of "ed" when the spoken sound is "t." But it would be hard to find one now who would "favour" the old spelling. And so we may as well give up first as last and write "workt." It may be a little rough on our prejudices for a time, but it will be a fine thing for the coming generation.

McHenry Co., Ill.

[*We believe that the whole of *three* subscribers have ordered their copies of the American Bee Journal discontinued on account of our effort to help bring about a sensible and much-needed reform in spelling. As to our subscription list, we can say it has increast very much since we began to use "t" in certain words ending in "ed" and pronounced "t." But of course we do not attribute the increase to the stand we have taken in the spelling reform.

There are many things that we can't understand, and, one of them is, that any really intelligent man would stop his paper just because it did not spell one word in 50 or so to suit *him.*—Editor.]

Pollen in Sections and the "Golden" Method.

BY J. A. GOLDEN.

After reading S. A. Deacon's criticism on page 484, I could not help thinking he is quite a little inconsistent, after contrasting his preliminary reflections. It is an old saying, yet true, that the wise practice what they preach. Mr. Deacon starts out by saying:

"It goes without saying that altho an abundance of nectar-secreting flowers and strong colonies are the main requisites for securing a good honey harvest, unless this be supplemented by intelligent manipulation we cannot expect to get the best results."

Such reasoning as this is both intelligent and wise, and is the result of practical information. Then further on, in the same paragraph, he says:

"A few apparently very insignificant matters of detail in the management of colonies may favorably affect the 'sum tottle' at the cessation of the flow, so we are not justified in lightly or contemptuously ignoring *any* suggestions calculated to work to the desired end......and the older and more experienced the propounder of any new suggestion, the more ready we should be to receive it with respect, and analyze, etc."

This also is practicable and commendable, and ought to be recognized to the very letter in the life of all mankind, and more especially by the noble and good.

But it seems that Mr. Deacon, after reading of my method of producing comb honey, back in 1896, did not recognize my practical observations, as I found them, with the least shadow of respect, more than to consider it complex and fussy, until he read Mr. Hartzell's article in 1897, which seems to have waked him up from his unimproved hours of practical slumber, and then he reviews the whole formula, theoretically, and concludes that for his life he can't see that I have adduced the least proof that my method was any better than other methods. Let this be as it may, I cannot see how I could give a more explicit explanation of the method in detail from beginning to end than I did in the various articles in the several bee-papers; and if Mr. Deacon has not read them I can't help it, and ought not to be censured as being reserved.

In presenting my method to the bee-keeping fraternity, I endeavored honestly and truthfully to present every feature of the system in as clear and distinct a manner as it was possible from a practical knowledge, giving accurate results by the two methods, for the reason that the majority of apiarists hold that more honey can be produced by the non-swarming colonies. Mr. Hartzell also gave a statement of practical evidence in manipulating bees by my method—that he found it more advisable than any other method, which ought to be proof enough for the apiarist to test the method with one colony, at least, as recommended in former articles, and not theoretically assail a system which has proved satisfactory in practice.

But as the years roll on, and apiarists are reaping profit by manipulating my hiving-back method, Mr. Deacon says he never tried Mr. Golden's plan—and why? for the reason that he is thoroughly convinced (theoretically) that he would get as much pollen as honey in the sections. He says he is sure he could not keep it (the pollen) out, and breathes forth a little prayer, saying, "What about the pollen?" after previously stating that it was beyond those new and peculiar traits of his thinking qualities that he speaks of, how I manage to keep pollen out of the sections. This seems to be a sticker.

I answer that, as a rule, bees deposit pollen in as close proximity to the brood, larvæ or eggs, as it is possible, and as my method has neither where the caged queen remains for the five days, neither does she deposit eggs during confinement, the bees take the side passage and deposit their pollen in the brood-combs, or that has been my observation, at least. However, there are exceptions to all rules—some apiarists have found pollen deposits in sections, but I have never as yet discovered one cell, in all of my experience. If sections of drawn or partly drawn comb were placed in the supers, bees might deposit a few cells during a brisk gathering of pollen, for it is a fact that bees at such a time do deposit occasional cells of pollen above the brood in section honey.

Again, sometimes loaded bees with pollen are frequently caught in a swarm when issuing, and they may deposit their load at their first opportunity after hiving under the excitement of the swarming-fever. I don't know that such is the case, and the most convincing evidence that I can suggest to Mr. Deacon is for him to practically test the method by manipulating one colony, at least, as recommended, for I don't know how I could state facts any more convincing than I have in previous articles.

In his closing paragraph Mr. Deacon thinks it is time we old boys gave our inventive faculties a rest, etc. Altho I am four years his senior, I shall not agree to his proposition, but so long as I have the power to think, reason and work, I'll improve the allotted time God has given me, to the good of my fellow creature, man, and the little honey-bee. I hope that Mr. Deacon will not become doty, and refuse to supply the wants of his South African bees.

Morgan Co., Ohio.

No. 5.—The A B C of Marketing Honey.

BY HERMAN F. MOORE.

[Continued from page 532.]

I filled Tiffin full of honey in short order, and departed for pastures new in Fostoria, a near-by town of 5,000. Trade was not good there, owing to abundant honey crop in the near-by townships. Farmers brought in their honey and sold it for anything to get tobacco money.

From there, after a short rest at home, and some recreation with the bees, I went to Toledo. the third in size in the State. I took a young cousin with me, and together we drummed the capital of Lucas county from one end to the other. Here we were in a city, and as expenses were heavier we raised our price on honey to 18 cents a pound, and packages extra. We had been selling pints or quarts, as desired, and a large percent of our sales were pints. This was a losing business, as the expense of handling so small a sale to a family ate up the gain. We stumbled onto this fact wholly by accident—that people buy, as a rule, whatever you offer them.

There were five of us drumming up one territory, and most of the boys were using pint Mason jars for samples, as they were small and convenient. One day one of the boys (salesmen) had no pint, and of necessity took a quart Mason instead. He made a good day's sales, and all quarts. That settled me; everybody used quart samples after that, and we quit selling pints entirely. We sold half a quart jar as a last resort, but no more pints. This was a considerable saving in expense, for we had only one size of package to keep in stock.

In getting our trade we made a clean sweep of residences, business houses, depots, elevators. In those days calling at houses did not seem to be so overdone as now. Nearly everyone gave us a pleasant reception at their homes. We had good honey to sell, and most of us were clean, wholesome young fellows.

But there are plenty of towns and cities nowadays where an attempt to solicit from house to house will cause certain failure. To any one meeting this condition let me say, "There are more ways of killing a cat than by choking him with butter," as grandpa used to say.

You will observe that honey is somewhat different from other family supplies. It is not used with any degree of regularity, like potatoes or butter, consequently, the father of the family can, and will, buy honey as readily as the lady of the house, and, what is more to the point, is more liberal in buying. He has the pocket-book, as a rule, and feels a natural pride in making a liberal provision. The lady too frequently is limited to just *so* many dollars a week to feed the family, and can't spare any for honey. So when such conditions arise, go to the offices and business houses, ask the men for their orders, and when they say "see my wife," explain to them why you don't call at the houses, and they will think all the more of you for it, and will usually give you kind attention and liberal patronage.

We made quite a little profit on beeswax. We moulded two-ounce cakes of nice, pure yellow beeswax, and they sold well at 10 cents a cake. We filled our pockets with them, and often sold 10 or more a day. This was 80 cents a pound, which made a good profit.

I was much amused by a letter written to my cousin by his father, saying that "he would better come home, as I would be out of honey soon." That reminds me of what a policeman said to me. Said he: "Now you know very well that nearly all the honey *here* is manufactured honey" (and tried to have me admit it). "You know it is a fact that there is not enough honey in the whole United States to supply Chicago alone." What answer can you make to such a man? He was almost ready to hit me between the eyes if I did not agree with him. I said: "My supply of honey lasts pretty well, as I am only selling to private families, and they only buy five or ten pounds at a time. I never sell anything but pure honey to my trade." The Book says: "Answer a fool according to his folly," and you may find the best way often is to ignore his remarks, and branch off into something interesting or instructive.

Recurring to the question of sending to another State for part of your honey, I had several experiences in Toledo that were somewhat interesting. I happened to run up to Chicago, and needing some honey I dropt into the commission-house and lookt at two barrels of fine, white honey. I spoke for them to be shipt to me at Toledo. When they came they were red. It must have been Southern honey, or possibly goldenrod. They attacht the bill of lading to a draft, so I paid for the honey before seeing it. Of course I protested, and they stood a small reduction, but that did not change my red honey to clover or basswood. It is a mystery how I ever got rid of that lot of honey; but one thing helpt me—the fact that people prefer a honey that has a deep, strong honey flavor; they think they are surely getting pure honey.

Another lot of honey was sent to me by a prominent Michigan bee-keeper. This was the strangest lot of honey I ever saw. It was 200 pounds of comb honey in one-pound sections. At first I thought it was extra nice and thick; it was so thick that when broken the honey would not run out. I took a cake of it home when I went to spend Sunday, and our folks would not touch it; they threw it away. I sold several cases to a grocery firm, and when they saw me (or I believe they wrote me) they told me to take it away. I am uncertain to this day what was the matter with that honey. It was most beautiful in appearance, but entirely lacking in honey smell or taste. My first thought was that it had been kept in a hot, dry place, and was more ripened than honey usually is. Some of my friends said the man had fed glucose to his bees. But I am told that bees will not store glucose.

I only go into these matters to emphasize the importance of greatest care in getting the honey you offer your trade. When you sell them something they don't like, they never forget or forgive. One of my customers kept telling me for three or four years that I had sold him molasses. The honey I sold him was, I believe, Utah or Colorado alfalfa, with perhaps half cleome or some other weed honey.

Very many people put the case thus: If you are a producer of honey, and if you are honest, your honey must always be good and always alike.

One of the things we must expect to do is to educate the people. Tell them about the different kinds of clovers, naming in particular the varieties in their immediate vicinage. Explain to them that even the different clovers ("cousins" I call them) give us honey with different colors, odors, flavors; that while there is a general similarity in different kinds of honey, there is also a dissimilarity as between different varieties of peaches, etc.

Some writers advocate selling candied honey to the public. I believe it will never succeed on a large scale. The easiest way, and perhaps the best, is to sell people what they want, and not what you think would be just as well for them, and save you some work.

The consumer judges our extracted honey by the comb honey that suits him, naturally enough. And comb honey is condemned by everybody when candied. Candying indicates age at least, and a good deal of the clean-cut, strong honey-flavor is gone when honey is in the crystallized form.

When a man takes home his purchase of honey he expects to enjoy a few meals of it with the zest of hunger for it. Now it must be in perfect honey condition to perfectly please his family these first meals from the new purchase.

I think no one will claim, from the consumer's standpoint, that honey is in perfect condition when candied. Many people have remarkt to me that candied honey "had no taste," "did not taste like honey." After having the honey for a time, the consumer is prepared for some change or other. Nearly every article of food is subject to some material change, usually souring or spoiling; and often when asking a customer for another order he has said, "That honey spoilt before I got it used up." Then I questioned him and brought out the candied honey condition, and explanations followed.

In melting candied honey care must be taken not to overheat it, and always strain it through two thicknesses of cheese-cloth. If stored in barrels slivers are often found in honey, and occasionally a bee or ant. Nothing of this kind should be allowed to reach your customer, as the effect is much like "settlings" in milk.

[To be continued.]

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"Golden" Method of Producing Comb Honey.

BY J. S. HARTZELL.

In answer to, and for the benefit of Mr. S. A. Deacon (whose article appeared on page 483), or any others desiring in like manner to know of the merits of the Golden plan of producing comb honey, I will endeavor to set forth my findings in regard to the plan.

But before doing so, let me say that I had fully determined that I would not be entangled with the bees this summer on any plan, but my intentions were thwarted, and I now have 40 colonies on the Golden plan, and 21 colonies on the ordinary or orthodox plan. Each method has been treated to the best of my ability, and I have been able to hold all within the bounds of increase.

Mr. Deacon says that neither Golden nor Hartzell, as far as he can see, makes any comparison between swarms treated on the Golden plan and by any of the older or ordinary methods. Please, Mr. Deacon, read my article again. Did I not give the amount of surplus honey obtained from my apiary, with the number of colonies in all, and of the six on the Golden plan at that time—what did I say concerning the one that did the best, and also of the one doing the least? Had all colonies in the yard done equal to the poorest on the Golden plan, the surplus would almost have trebbled in the amount obtained. Is that not sufficient evidence, or enough in favor of the Golden method?

This season will soon close, and I propose again to give my experience for the season, and results as to surplus honey from both the Golden and the older or orthodox plans, which will be a final settlement with me on the plans as now in vogue, and with only one eye open I can plainly see at present where the most favorable results will come from.

Mr. Deacon appears to think that a swarm hived on starters with supers placed where their name indicates—viz.: on top—would equal a returned swarm on the Golden plan. This is a great error, misleads, and is calculated to determine to hold fast to the old taught theories. Practically, a swarm returned, remember, is not going to lessen in number, but increase, whilst from being hived on starters before any gain in numbers could be produced, there would be a loss in force, and comb to build in the brood-chamber, necessitating a loss in honey. Then, too, hives must be bought and got in readiness, and if at the beginning of the season we have as many colonies as desired, at the "winding up" we can safely count on twice as many.

This theory of hiving swarms on starters, and honey going upstairs, is only partially true. Bees will have honey and pollen in the brood-chamber, and if worker-comb cannot be prepared fast enough for the queen to lay in, and for storing honey and pollen, the result is drone-comb will be built and used first for storing honey, then for rearing drones, and I have my doubts whether drone-comb would be built to any great extent when bees are merely securing a living from the fields.

Mr. Deacon seems to think the Golden method can be used only with a swarming colony. He certainly misunderstands. But, *preferably, I want the colony to swarm.*

In regard to pollen in sections, let me say more will appear in the sections where a single section or half-story supers are used, is my experience. I have used, this summer, several double-tier or full-story supers, and found in one, at the time of liberating the queen, a few cells of pollen in three sections, and none in any others, and I attribute pollen in the sections named to the queen being caged in the lower tier of sections, therefore too far from the brood; but with a half-story or single-tier supers no pollen in sections, owing, presumably, to the cage being near the brood-nest, and the bees knowing by instinct that there is where the pollen and the queen both belong.

To sum up: According to my views, as experienced by using the Golden and old or orthodox plans this season in my apiary, I anticipate from the Golden plan far the best results in securing honey.

Then, in regard to wintering, no winter-cases are needed, no ticks or chaff cushions to be prepared and kept in order, housed and stored during the summer. The feeder, when needed, is always in a safe and convenient place for use, and if the queens are to be superseded that is easily accomplisht; and once the hives are prepared and the number of colonies in stock wanted, you need not fear of being tied up by not being able to have your order for hives filled, as was the case the past summer.

Mr. Deacon appears to appreciate, or realize, that he is growing old, approximating three score years, and thinks Mr. Golden nearing the same; and that both should cast aside inventive ideas, letting the younger ones run the advance department. Can Mr. Deacon, or any one with a mind, cease thinking? And as new ideas or thoughts enter the cranium, our desire is, if after due deliberation they appear feasible, to put them into practice, which tests or proves whether practical and of value. This I deem right, and Mr. Deacon coincides with me, for he has concluded, and I presume fully tested to his own satisfaction at least, that his "Rapid Drawer Feeder" is not only superior to Golden's, but any other feeder. Now, Mr. Deacon, lay aside the various ideas that may enter your cranium; don't think on bettering that feeder in any way or to improve on any of your methods in managing your apiary, for many perplexing things present themselves daily, and our minds must be fully at rest. Or, we must endeavor to fathom the problem before us. Which are we most likely to do?

Somerset Co., Pa., Aug. 8.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Question on Italianizing.

I live on the outskirts of the city, and keep bees for fun. I have seven colonies, six on frames and one in a box. Also three colonies six miles from here with a man to keep on shares—½. What I wish to find out is this:

June 5 hive No. 3 cast a big swarm. I hived them, moved hive No. 3 to a new place, and set the new swarm on the old stand. June 6 No. 1 cast a very large swarm. I hived and set it in a new place, and left old hive in its old place. The same day I sent for a queen and cut out all queen-cells in No. 1. The new queen was promist in two or three days; I waited till the 11th, and no queen received, so I countermanded the order. I had ordered another queen which I received June 11. I cut out the queen-cells in No. 3, and put a cage on top of the frames; opened it the 13th, and found they had liberated the queen. July 15 I saw the first Italian bees. Since then they have increast until they are nearly all Italians.

Now we will go back to hive No. 1. I had cut out cells in No. 1 June 6; June 16 I received another queen and put her on the frames; the 18th I opened No. 1 and found the queen liberated. I waited ever since to see Italian bees, and three or four days ago I saw four, and none since, until to-day (Aug. 2) at noon I saw perhaps 100 out, but did not stay long. I also saw a few yellow drones. I thought the queen must be killed, and sent for another which I received to-day.

Why is it that no yellow bees showed up before? What has the queen been doing all this time? The hive should be full of Italian bees by this time.

There is plenty of white clover all about me in fields and by the roadside. I have lookt for bees on it 50 times, and have never seen but two bees on white clover.

I do not know what to do with my new queen. I have a 12-story hive nearly full. I suppose I might take it off and give the queen and make a new colony, but I have more than I want now.

MASSACHUSETTS.

ANSWER.—No. 1 swarmed June 6, and on that same day you cut out the queen-cells. The probability is that there were plenty of eggs present, as also brood in all stages. That would allow the bees to rear a young queen, and the young queen would depose the queen introduced and assume the reins of government. That is what one would most naturally expect. It may be, however, that the color of the young bees showed clearly that they were the progeny of the queen you introduced. In that case the probability is that for some time the bees kept the new queen balled *for a time*, and then she may not have begun laying for a number of days. Such delay on the part of a queen introduced is not so very unusual.

It is quite possible that eggs were laid earlier than you suppose. From what you say, it appears that you depended on seeing the young bees outside, without looking into the hive. Young bees do not commence field-work till about 16 days old, so you would not see any of the new bees outside for two weeks after plenty of them may have been inside, unless you happened to be at the hive when they were having their play-spell.

Perhaps "Bare-Headed" Bees.

I have 30 colonies in modern hives, all in good condition, only in looking through them I found in a few of them some unsealed brood that seemed to be dead. Some of it was turned wrong end out, and that that was right end out (head) had pink eyes. It is all full size, and very tender. What can be the matter with them? I never had any experience with foul brood, and do not want any.

There has been no surplus honey in this part of the country this season—too much rain. We look for a fine honey-flow this fall when the yellow blossom and smart-weed bloom. The nights are too cool now for anything but sickness.

I get a great deal of information out of the American Bee Journal.

MISSOURI.

ANSWER.—Probably yours is a case of what is called "bare-headed bees." If so, the brood is all right, altho it may appear dead. It is motionless but not dead, and you will find that in due time it will hatch all right. Just why it is that sometimes patches of these bare-headed bees occur, bee-keepers are not agreed. I feel pretty sure, however, that the wax-worm has something to do with it. Often I have seen a row of these unsealed larvæ in just such shape as one would expect where the gallery of a worm had been run through the cappings, and you will probably find that bare-headed bees are much more common with blacks than Italians, as Italians do not allow the presence of worms to the same extent as blacks.

Closed-End Frames—Enameled Cloth—Long-Idea Hive, Etc.

1. If I understand correctly, "Common Sense Bee-Keeping" condemns the bee-space between the frame end-bars and the hive wall, so as to have the frames close to the latter. Wouldn't there be great danger of crushing bees and queens in handling such frames, besides the general difficulty to get them in and out?

2. Do you use an enameled cloth on top of the sections, also frames in hives? and do you think it such an essential and necessary attribute to the bees' comfort?

3. What kind of a hive is the "Long Idea Hive"? and how is it constructed? Where did it originate? I never found it mentioned in any of the catalogs.

4. On page 139, the "Lareese escape" is recommended for getting the bees out of supers. In what way is this one different from the Porter escape? Is it preferable?

5. Which is the better, tin or zinc rabbets? Frank Benton, in Gov. Bul. No. 1, "The Honey-Bee," a manual of instruction in apiculture, gives preference to tin rabbets without giving any reason for his assertion. Are they one chemically?

6. How are observation hives constructed, generally, with one or more frames? with glass on one or both sides? I do not recollect having seen one.

7. What color is borage honey—white or amber? Bees are working on it from morn to night.

8. You certainly have some knowledge about the fuchsia flowers. Do they contain sufficient nectar to guarantee some bee-pasturage? Which is preferred, the single or the double?

9. J. S. Sleeth, on page 414, askt what caused the bees to discharge feces of the color of dandelions in large blotches, etc. As I had the same occurrence last fall, and again lately just after dividing, that the bees of the newly-made colony were bespattering the front of the hive when coming out—(but my bees didn't roll over and die)—I accounted for it as a usual happening after overfilling with honey to follow it up with some diarrhea; or that it was the cause of robber bees. Can you give me more light on it?

CALIFORNIA.

ANSWERS.—1. Yes, they require care in handling.

2. Since using flat board covers I have used no enameled cloth, or cloth of any kind. It is warmer in cold weather with the cloth, and it is a protection in hot weather against the sun,

but the advantages are overbalanced by the trouble and the daubing with bee-glue.

3. The "long-idea hive" is what may be called a horizontal hive, like the *lager* hive of the Germans or the Layens hive of the French. Simply make any hive large enough to contain 20 frames, more or less, and you have a long-idea hive. No second story is used, and the surplus frames are at one or both sides of the brood-frames. It was first advocated in this country some years ago by a bee-keeper in Kentucky, and I think is not listed in catalogs.

4. J. S. Reese perhaps deserves chief credit for bringing to the notice of the public the bee-escape for clearing supers. He used a cone escape. W. G. Larrabee improved it by making a series of horizontal cones, somewhat after the manner of a set-net for fishing. The editor of Gleanings, desiring to give credit to both men, combined their names, calling it the La-Reese or "Lareese" escape. I don't find it now in the Root catalog. For use under or over a pile of supers it is better, in my opinion, than the ordinary Porter escape, but it may be that the honey-house Porter escape is just as good.

5. Tin is generally used, perhaps because cheaper. I don't know that there's any other difference.

6. You will find an observatory hive illustrated in Root's A B C of Bee-Culture, and in Langstroth's book. Simply make a hive of one frame with glass on two sides.

7. I don't remember to have seen the color of borage honey given. Unless a honey-plant is so abundant that bees work on it almost exclusively, it is very hard to tell much about the honey. There are a good many plants that are considered good honey-plants from the fact that bees are seen busily working on them, but no one knows just what the honey is like, because it has not been obtained unmixt with other honey. If your bees have much of it to work on possibly you may be able to tell us about it.

8. Practically I know nothing about the fuchsia as a honey-plant. I have a plant some six feet high with hundreds of blossoms on it, and altho while in the house in the winter I've seen drops of honey falling from it, I have never seen a bee on it outdoors. What it might do in your California if present on a large scale is another question. At a guess I should say it would be a good honey-plant, but would not pay for cultivation. Very likely the single variety would be better than the double. That's the general rule with any plant.

9. The bees discharge their excrement in the way mentioned after being confined for some time, and also sometimes under unusual excitement, the latter probably in the case you mention.

Demented with Bee-Fever.

I have the bee-fever real bad, from hearing my mother-in-law talk about some bees which were once kept by her father, down in Georgia. She says there is money in it, and talkt so about it I soon took the fever, and nothing must do but I must go bee-keeping, for she is awfully fond of all kinds of sweet things, when they are not too sour, like jams and syrups, so I know she will like to eat the honey if I take the fever—and don't get stung up too much by the "king-bee" when the time comes to take the honey off the "gum," so that I won't quit the business from being stung and give up trying to produce honey before I make a success of the business. And so, to know a little more before I embark, I want to ask some questions:

1. How can I knock out the moth from killing the bees and eating up all the honey before I can get some for my mother-in-law and the balance of the family, and also some to sell at the store?

2. Also, if I wear a red shirt (which I almost always do), will it act on the "king-bee" like a red rag does on a bull, and makes him mad so he will come out and go to fighting and stinging me?

3. Mr. Johnson, who is a carpenter and wheelwright, has some bees about three miles from here, and says there is only one "king" in a "gum," and he starts the fuss and the others follow up, and that's how a person gets stung all up while taking honey, unless he kills them all with sulphur, which I don't want to do if I can help it. I know there are two kinds of honey in a gum—one comb honey and the other extracted honey. I will try to produce comb honey, as it looks more as if bees made it. But Mr. Johnson says comb honey is apt to break down unless you stick wires through it.

3. How do you stick the wires through the comb honey before you sell it? And must it be galvanized wire? What is the right size to stick through?

4. I heard there are two kinds of bees—the honey-bee and the Italian bee—which is the best kind for storing sweet honey from the flowers?

I will wear heavy gloves and thick overcoat, and a wire hat over my face, when I take the honey in the fall of the year, so the "king-bee" can't get his stinger through and start a fuss in the "gum." I am very anxious to start bee-keeping, but want to know how to manage the bee-moth before he eats up the honey and I get ready to take it.

VIRGINIA.

ANSWERS.—1. One way is to catch the moths, cut off all their wings on one side, carry them three miles from the apiary, and then they can't find the way back. But that's too much trouble. A better way is to have very strong colonies. It's the weak colonies that give a foot-hold for moths. If you have Italian bees, even a rather weak colony will keep the moth at bay. I've seen woolen cloth that was moth-eaten, but never honey. I think the larvæ of the bee-moth never eat honey, only wax.

2. I wouldn't advise you to take off your red shirt. The bees might sting you a good deal worse if you had no shirt on. I think a white shirt would be better than a red one, and black is the worst.

3. Mr. Johnson has got mixt up about sticking wires through honey. It's rock candy he's thinking of, which doesn't have wire, but thread stuck through it. I wouldn't stick wire in the honey, but try to find some other way to kill off the mother-in-law without feeding her on wire. If you must use wire, pieces an inch long would be about the right size. She's more likely to strangle on them than on pieces of smaller size.

4. Get the combined article, the Italian honey-bee.

If there's anything more I can do to help you, don't hesitate to write.

Bee-Keeping in Puerto Rico.

We will have scarcely any surplus honey here this year, but bees are in good condition.

Can you give any information in regard to bee-keeping in Puerto Rico? I see it stated that there is exported from there one million dollars' worth of honey per year. What effect will it have on our market if Puerto Rico becomes a part of the United States? Would their honey come to the United States free of duty?

VIRGINIA.

ANSWER.—I know nothing about bee-keeping in Puerto Rico, but it is likely somewhat the same as in Cuba. When Puerto Rico becomes a part of the United States, undoubtedly the rest of the United States must stand the competition of its honey without any duty. If honey can be produced there cheaper than elsewhere, by all means that production should be encouraged, just as we should encourage its production in Wisconsin or California. If Puerto Rico becomes part of the United States, it will be because we started out to give Spain a thrashing for bullying Cuba, and we mustn't go back on that unselfish spirit by doing anything to handicap Puerto Rico.

Colony on Crost Combs.

What shall a beginner do with a colony of bees that is in a frame-hive, but the combs crost and warpt every way, only one straight comb in the whole hive. Should I transfer them? I have a new hive on top with three good frames of honey; the hive I took out and put in empty frames with starters, and they have them workt almost down. I had them last year but didn't have the American Bee Journal, and so didn't get a pound of surplus honey. This year I got 100 pounds. Since I have the Bee Journal I am learning more than I did last year.

BEGINNER.

ANSWER.—Better leave them right where they are till next year. It is possible that if transferred now they might come out all right, but if there's little fall honey they would perhaps not be in good shape to stand the winter, and in any case they will likely winter better where they are than to be changed so late in the season. Very likely you did better for having the Bee Journal, but the season may have had something to do with your getting 100 pounds more than last year. You are fortunate, as most bee-keepers are complaining of poor yields this year.

The Names and Addresses of all your bee-friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums we are offering. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.

AMERICAN
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK. EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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Place and Date of Next Meeting:

Omaha, Nebr., Sept. 13, 14 and 15, at the Delone Hotel, Cor. 14th Street and Capitol Avenue.

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EDITORIAL COMMENTS

Note.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Migratory Bee-Keeping in Europe is more common than in this country. Colonies are moved to get the benefit of rape-fields in some cases, in others heather-fields or buckwheat-fields may be the point of attraction. Gravenhorst's Deutsche Illustrierte Bienenzeitung gives two illustrations showing a load on each ready to start for the buckwheat-fields in the great buckwheat-region of Marchfeld. The wagons are very long-coupled (ladder-wagons), perhaps three times as long as common wagons. One of them takes 40 to 50 movable-comb hives, or 70 to 80 straw skeps.

◆

The Name "Old Reliable."—Mr. John H. Martin, in a department in Gleanings in Bee-Culture called "California Echoes," gives this "echo" which will be of special interest to our readers:

> The other day when Mr. Levering was washing dishes and I was wiping them (you see we are baching together), said he, "Do you know where the term 'Old Reliable' originated, as applied to the American Bee Journal?"
>
> "No, I have not the least idea," said I.
>
> "Well," said he, "when I lived back in Missouri there was a stage-driver whose arrival was as regular as the rising of the sun, and seemingly the most violent storms would not interfere with his regularity, and he became noted far and near as the 'old reliable.' When I edited the bee-department in the Los Angeles Herald the American Bee Journal came to the office so regularly that I was reminded of the old stage-driver, and noted the fact, and in the next issue inserted an item calling it the "Old Reliable." Soon after I saw it copied, and from that time to this it has borne that name. Now, some one else may have suggested the same name, but nevertheless the term applied was original with me."

We are glad to know this, even if it did occur years before we were publishing the American Bee Journal. But we have striven ever since to keep up its former reputation, and think we have succeeded pretty well in so doing. It takes planning and steady work to do it, but with a fair degree of health, love of the work, and faithfulness and devotion on the part of our employees, we have been enabled to keep the "Old Reliable" as reliable as ever in its weekly visits to its far and near subscribers.

◆

English Views of American Appliances.—W. Woodley, a leading contributor of British Bee Journal, does not seem to be greatly taken with some of the things that are exciting interest on this side of the water. He has tried the plain section and fence, and finds no advantage over the ordinary two-bee-way section, the latter being just as well filled, easier to handle, and presenting a better appearance. It may be remarkt by way of parenthesis that Gleanings presents some very favorable reports on the plain section and fence.

Mr. Woodley sees no advantage in a section-folder, as the sections fold easily by hand and are readily lockt together by a little hand pressure. Some bee-keepers on this side who have several thousand sections to fold find it to their advantage to have the machine because little folks can fold sections with it whose hands would not be strong enough to force the dovetailed ends together. He has no use for a "section-cleaner," no scouring or cleaning being required, as his sections are *never made dirty.*

◆

Weights of Bees and their Loads.—Mr. C. P. Gillette, in the report of the 8th annual meeting at Detroit of the Society for the Promotion of Agricultural Science, shows in a table the results of some interesting experiments regarding the weights of bees and the loads they carry. Editor Root, in Gleanings, says of it:

> According to the table there would be in a pound, on an average, 5,578 unloaded worker-bees; 3,532 honey-laden bees; 5,060 pollen-bearing bees; 5,447 unloaded pollen-bearers; 5,394 idlers taken on the front of the hive; 2,206 drones; 10,965 loads of honey; and 40,580 loads (the amount carried on both legs) of pollen.
>
> These experiments are interesting, as they confirm largely the work of others. They also show what is very interesting to me, that a worker-bee may carry a weight of honey equal to its own weight, and that pollen-loads do not usually run more than a tenth of the weight of the bees.

◆

A Japanese Bee-Book, called simply "Bee-Culture," is one of the curiosities that we received recently from the publishers, J. Ikeda & Co., of Tokyo, Japan. The author is Prof. Tamari, once a student in the Michigan Agricultural College, when Prof. Cook was connected with that institution. The book is, of course, printed in the Japanese language, which in appearance looks very nearly like Chinese. When we went to Dr. Miller's, a few weeks ago, we took it along for the Doctor to review, but he seemed to think he'd have to "draw the line" on that book. And we think even Mr. Cowan would have to add another language to his present number before he could do much with it. But we wouldn't advise him to attempt to learn Japanese thus late in life.

Accompanying the Japanese bee-book was the following letter, from Mr. J. Ikeda, who writes English fairly well:

> Tokyo, Japan, June 1, 1898.
>
> Gentlemen:—We are told that your American Bee Journal is the oldest American bee-paper, and influential on this line. In Japan bee-culture is not developt yet, and the species of bee belong to some inferior kind.
>
> Prof. Tamari, of our Imperial University, studied this line with Prof. Cook, during his stay at the Michigan Univer-

sity. He is the only man who taught us how to keep bees after some developt manner. He wrote a work on bee-culture, and I am very glad to announce that I am the publisher, and have the honor to distribute this valuable book. Iths now reacht the third edition, and you can guess how eager people are to grasp Western knowledge on this subject

Our Agricultural Department imported some Italian bees, but we are sorry to say that it is not a success, except in Ogasawara—a remote island in Japan. If we put two hives, one with Italian and the other Japanese native bees, the former is stronger and steals honey from the Japanese hive, and at last the Italian kills the latter. But the latter endures the winter season best, and the failure comes from this fact. We are told that we would better cross the Italian with Japanese bees, and we are going to try it this or next season. We have some native bees, and wish to let apiculture become more prosperous.

We have an agricultural magazine called the Popular Agriculturist, and will try to do something on this line. We mail you in a separate package a copy of Prof. Tamari's work, and a copy of our poor journal.

Yours truly, J. IKEDA.

J. Ikeda & Co. are seed growers and publishers of books for the farm and garden in Japan. They issue a work in four volumes, called "Useful Plants of Japan," containing descriptions of over 1,000 plants with names in Latin, Japanese and Chinese, and carefully illustrated in proper colors. Ikeda & Co. must be an enterprising firm.

◆

Honey-Dew is reported by many this year as being unusually plentiful, in some cases sections of white honey being more or less tainted by it. Regarding the danger of having it for winter bee-food, the editor of Gleanings says:

> But perhaps some of you may say, "What am I going to do if I find some of the stuff in the brood-frames?" I would do nothing about it at all—just leave it there. Our knowledge of wintering has progrest so far since 1885 that I believe the majority of bee-keepers will be able to winter their bees on this food almost as successfully, perhaps, as on the best sugar syrup. Indeed, I am coming to believe that the food has less to do with successful wintering than we formerly supposed it had; for we have for years wintered our bees successfully on all sorts of stuff, even including the vile "bug-juice" of which we had so much in our hives during the winter of 1884. The loss that year was only 5 percent, and there were heavier losses that year, attributed to honey-dew, than any year since 1881.

On the origin of honey-dew, Editor Root has this to say for the benefit of the newer readers:

> It is a secretion or excretion usually found on the leaves of trees; and in most cases it is the product of an insect. This saccharine matter sometimes dries on the leaves. After a light rain it is moistened, and then the bees will roar around the trees and tumble into the entrances as if they were working on basswood. If the storm continues the sticky stuff will be washt off the leaves, and the poor bees will be humming around for that which has suddenly disappeared; and then, my, oh my! how they will sting! just as if you and I were to blame!
>
> This peculiar secretion is usually found on the leaves of maple-trees. In such cases it comes from the maple-bark louse. Sometimes it is present on the leaves of hickory, and then, again, on low-spreading bushes. Whether the insects deposit it or not, this peculiar kind of "dew" sometimes fall in the form of spray, and many and many a time the sidewalk under the trees will be markt or spotted with the "juice."
>
> Honey-dew was formerly supposed to be a real dew from heaven, hence its name; but it is now known that the greater part of it is the product (or, more properly speaking, perhaps, excreta) of insects. But there is a kind of honey-dew that is a secretion from certain fungi, and also the leaves of certain plants. That this is true is proven without doubt.

◆

Side-Issues in Class-Journals.—The editor of the Bee-Keepers' Review, speaking of matters other than bee-matters in bee-papers, says: "A little touch of them occasionally, like pepper in our food, may be all right, but the less the better." Which probably expresses the views of most readers.

THE WEEKLY BUDGET

MR. M. H. HUNT, one of Michigan's bee-supply dealers, in Wayne Co., wrote us Aug. 17:

"The season has been a good one with us in the supply business, but the honey crop is short."

MR. E. KRETCHMER, of Montgomery Co., Iowa, writing us Aug. 11, said: "Bees have done nothing in this part of the country." That seems to be the report from quite a number of localities this year. Too bad, but "what can"t be cured must be endured," and trust that a better season may follow.

MR. L. KREUTZINGER, of Chicago, had his annual "honey harvest gathering" at his home apiary last Saturday afternoon, Aug. 27. He has about 125 colonies in this apiary, and about 100 in an out-apiary. Next week we hope to have more to say about Mr. Kreutzinger's "honey harvest" and crop.

MR. W. H. LEWIS, of British Columbia, writing us July 26, said:

"There are not a great many bee-keepers in this Province. Last year there was no surplus honey; this year every one has a little. I don't think it much of a bee-country on account of cold, wet springs."

THE LEAHY MFG. CO. report that during the past year they have sold "22,000 hives, counting 1½ stories to each; 500,000 frames of all descriptions; 3,000 smokers, and a little over 3,000,000 sections." They are planning to enlarge for another year, by adding about $2,000 worth of machinery, and doubling their present factory capacity. They will thus try to avoid working more than 10 hours a day in the busiest part of the season.

GENERAL GREELY'S 278 DAYS OF DEATH.—The true story of those 278 days of suffering by Greely's heroic little band of explorers in the arctic region has been told by Geo. Greely himself, for the first time, for the October Ladies' Home Journal. For years Gen. Greely has kept an unbroken silence about his fearful experience and that of his companions, as they dropt dead one by one at his side, and it was only after the greatest persuasion that the famous explorer was induced to write the story.

MRS. L. HARRISON, of Peoria Co., Ill., writes thus for Gleanings on the subject of "facing goods:"

"Let's have none, be it apples, potatoes or honey. I bought fancy Ben Davis apples for a Christmas-tree in the South, and was chagrined to find that they were only 'faced.' I was willing to pay the price for 'fancy' for the whole package."

Heaven must be a nice place. There'll be no deception there. But why not have a foretaste of Heaven *here?*

MR. M. P. FICHTENMAYER, of Bristol Co., Mass., wrote us as follows July 20, when sending a new subscriber for a year:

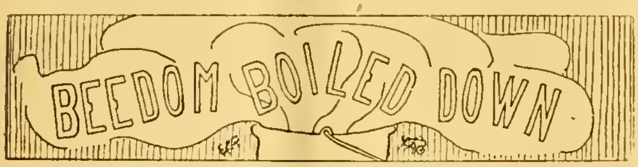
"Knowing well your efforts in apiculture, I will try to send you one new subscriber every year, as I know they will be satisfied with your journal as well as I am. I hope every one will help you along."

Thank you, Mr. F. Just think what a list we would have if *every* reader would do as you are doing! Why, the number of the Bee Journal readers would just double every year. Wouldn't that be splendid?

MR. H. GALLOWAY, of Skagit Co., Wash., is one of the hustling kind of bee-keepers. When sending another new subscriber lately, he said:

"I think this makes four new subscribers that I have sent you. If the rest of the readers would do as well I think you would have the required number the old American Bee Journal is worthy of. Let every reader of the American Bee Journal send Editor York four new subscribers before Jan. 1, and see what a smile he will have on his face when he goes home to that wife of his."

Yes, Mr. Galloway, that *would be* a great smile-producer. If we had four or five times the present number of regular subscribers, we would—well, we would do a number of the things we have been aching to do in connection with the American Bee Journal. But if each one can't send four yearly subscribers, then send two besides your own renewal. That would make three times our present list—enough to put in at least two of the biggest improvements in the old American Bee Journal that we have had in mind for several years.



Two-Pound Plain Sections are made by Geo. O. Morris by taking two one-pound sections, putting a sheet of foundation between them, and then pressing together.—Gleanings.

Snow-White or Cream-Colored Sections.—G. K. Hubbard is endorst by Review and Gleanings in saying that it is not consumers but bee-keepers that demand such white sections, honey looking nicer and whiter in the darker wood.

Arranging the Brood-Nest for Winter.—When the four central combs contain little honey, the outer combs on each side having the bulk of it, Mr. Doolittle often puts the four central ones at one side and the combs with honey at the other. That prevents the bees being stranded in winter at one side while there is plenty of honey at the other.—Progressive Bee-Keeper.

Pacific Bee-Papers.—They never live long. The Fresno County Bee-Keepers' Association voted money out of its treasury to pay for "our California newspaper" on the generous terms offered by the publisher. Months have past, and no publisher, paper, nor money has been located yet. I guess California soil or climate is not good for such literature.—W. A. H. Gilstrap, in Gleanings.

Must Read the Bee-Papers.—The editor of American Bee-Keeper has a distinct conviction that a bee-keeper must take one or more bee-papers if he would keep up with the procession. He says: "In conversation with an up-to-date man, a bee-keeper who neglects to read the journals devoted to his interests, will invariably 'give himself away' in the opening sentence. There is no disguising a 'back number.'"

Drone-Rearing in Swarms with Young Queens.—Referring to a question by C. Theilmann in this paper, asking whether any one had ever known drone-comb built the first day of swarming with a young prolific queen, or drone-brood reared the first two or three days, Editor Hill, of the American Bee-Keeper, is anxious to hear whether such a thing ever occurred under the conditions named, within three weeks after hiving.

Prevention of Swarming.—"With the Heddon hive you can have the lower story on the bottom-board all the season, and put another story of combs or foundation on this one when the hive becomes sufficiently crowded, and you will have practically no swarming," says W. A. H. Gilstrap in Gleanings. "After the swarming fever commences the only way I know of to stop it at once is to kill the bees or close the hive so they cannot fly....My bees will not carry honey up-stairs *a la* Heddon when the cases of the brood-chamber are alternated."

Shall All Farmers Keep Bees?—Somnambulist, in the Progressive Bee-Keeper, refers to the question on this point in the Question-Box of this paper, and quotes "We will be what we *will* to be." "*Can* every one be a bee-keeper? Just as well ask, Can every one be a doctor, lawyer, minister, merchant, or any other thing he might desire?" Referring to the importance of bees as fertilizers, Somnambulist says:

"Will not the same bees, in the hands of a specialist, accomplish as much in the way of fertilization, as tho they belonged to the separate farmers of the neighborhood? Then why not relegate the whole business to the skilled hands of the apiarist, who will not only make the most of the resources, but will many times save to the neighborhood whole apiaries that would have died of starvation had they been sitting around in out-of-the-way corners waiting for the overcrowded farmer to think of them and their needs."

Some Rich Advice.—The American Bee-Keeper gives a clipping from an agricultural journal as a sample of the bee-lore therein contained, and follows it with some remarks about "visionary amateur" and "delirium tremens." It will bear reading more than once: "In the spring and summer provide the bees with plenty of honey-making food and pure water, and do not keep them near orchards on which insecticides are used. A field of Alsike, white or crimson clover, with a flower garden near by, will remove all necessity for the bees seeking the orchards for nectar."

A Pretty Picture of an Evening in Cuba, with a reference to the music of an apiary at night which will thrill every genuine bee-keeper, is thus given in an editorial in American Bee-Keeper:

"When the brilliant hues of sunset had faded from the mountain peaks, and in their stead a craggy outline of the southern horizon was dimly seen through the shades of night, and the doleful sounds of the tom-tom from the slave quarters of a distant plantation came faintly upon a zephyr from the sea, gently rustling the coarse leaves of the towering palms, then it was, after a day of active work in the apiary, we returned again, to hear the one familiar sound—that of an apiary at night. No sweeter music ever fell upon more appreciative ears. There is something akin to magic in the influence of this sound 'like rushing waters'—the rapid vibrations of a million wings—and the odor of nectar upon the air, by which a bee-keeper is instantly translated from this ordinary old world of ours, through spontaneous meditation, to another realm. It is the voice of success—the hum of prosperity—which captivates the mind, and he becomes for the time monarch of the municipalities represented."

Finding the Queen.—The Progressive Bee-Keeper has some good hints from Messrs. Aikin and Doolittle. Aikin says avoid much smoke, jarring, or anything to make bees run or leave the combs. Commence lifting out the combs next to you, and before looking at the comb you lift out, look *first* over the face of the next comb. Often you'll see the queen on that, when you can quickly put down the comb you have and secure the queen. Doolittle says take an empty hive, or preferably a light box, and set the frames in this as you take them out, setting the first frame *on the further side from you,* next close to it, and so on. That gives a chance to see if the queen has been left in the hive, and the order of placing gives a chance to glance over the sides of the frames in the box before lifting out, as you give them a second search in putting back into the hive. Hold the frame well from you, so as to be able to glance over the whole of the comb at one glance. Holding the comb obliquely will also help, a larger part of the comb coming in the field of vision, and the abdomen of the queen showing better at a side glance that if you look square upon her back.

Nature's Plan of Enlarging the Brood-Nest.—Advising a beginner how he might become a successful bee-keeper, G. M. Doolittle, in Gleanings, instructs to shut off with a division-board as many brood-combs as the bees can cover, and when these are filled with eggs part them in the middle, and insert a comb of honey with the sealing broken, and in a few days this will be filled. "Thus it will be seen that, instead of the queen laying her eggs on the outside of the cluster, she lays them in the center of the brood-nest, where they should be." A Stray Straw (July 15) says: "That 'where they should be' raises the question whether Nature's plan of enlarging the brood-nest in spring is all wrong. To this Mr. Doolittle replies:

"Say, Doctor, what *is* Nature's plan of brood-rearing? Where are the *first* eggs deposited—in the center of the *cluster*, or on the outside of it? 'Ah!' I hear you saying, 'in the *center*, always.' Then that's Nature's way, is it not? And the queen would lay *all* of her eggs there every time were it not that, as the brood increases, she is obliged to lay her eggs in the next nearest cells to those in which she laid the first, and so on and on, keeping just as near the center at all times as possible, consistent with those already in the cells. To prove your point, Doctor, you must show that the queen would naturally lay the *very first* eggs of the season on the outside of the cluster or brood-nest. Can you so prove?"

FOR THE READERS OF THE AMERICAN BEE JOURNAL.

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7 Hutchinson's "Advanced Bee-Culture
8 Dr Brown's "Bee-Keeping for Beginners"
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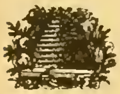

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QUESTION-BOX

In the multitude of counsellors there is safety.—Prov. 11-14.

An Average Crop of Honey.

Query 81.—1. What do you consider an average crop of honey in your locality for the past 25 years?

2. What would be an average honey crop in your locality for an apiary of 250 colonies?—N. Y.

E. S. Lovesy (Utah)—1 and 2. From 60 to 70 pounds.

Dr. J. P. H. Brown (Ga.)—1 and 2. About 30 pounds.

Jas. A. Stone—1. 50 pounds per colony. 2. About one-half that much.

W. G. Larrabee (Vt.)—1. 40 pounds per colony. 2. Probably a little less.

Emerson T. Abbott (Mo.)—1 and 2. I am not posted with regard to the matter.

P. H. Elwood (N. Y.)—1. 40 pounds, and growing less yearly. 2. I don't know.

R. C. Aikin (Colo.)—1. This country has not been settled so long. 2. Probably 40 pounds.

G. W. Demaree (Ky.)—1. It is only a guess—a guess with me—40 or 50 pounds to the full colony. 2. I think

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250 colonies are too many for my locality in one apiary; I don't know how they would succeed.

E. France (Wis.)—1. About 50 pounds of extracted. 2. I never tried so many in one apiary.

Eugene Secor (Iowa)—1. 50 pounds, if properly managed. 2. If kept in one apiary, 10 pounds.

Mrs. L. Harrison (Ill.)—2. In this locality there should never be more than 100 colonies in one place.

Prof. A. J. Cook (Calif.)—I think it is put, for the time bees have been kept here, at about 75 pounds.

Dr. C. C. Miller (Ill.)—1. At a guess, somewhere from 25 to 30 pounds. 2. Considerably less than nothing.

R. L. Taylor (Mich)—1. 40 pounds of comb honey for good colonies. 2. 40 pounds a colony if they were good colonies.

Mrs. J. M. Null (Mo.)—1. Extracted, 60 to 100 pounds; comb, 35 to 60 pounds. 2. A distance of a few miles sometimes doubles the crop.

Chas. Dadant & Son (Ill.)—1. 50 pounds per colony, or thereabout, of extracted honey. 2. We would not think of keeping 250 colonies in one apiary.

J. E. Pond (Mass.)—1 and 2. I have given no attention to the matter, and don't know; but not enough bees are kept within miles of myself to make an answer of any value.

J. A. Green (Ill.)—1. At a guess I should say 25 pounds. 2. In an apiary of that size I should not expect the average to go any higher than the general average of the locality, perhaps less.

G. M. Doolittle (N. Y.)—1. 75 to 90 pounds. My average has been not far from 80 pounds for the past 30 years. 2. 250 colonies would be likely to overstock any locality, if placed all together.

J. M. Hambaugh (Calif.)—1. In accord with best information I can obtain, 100 pounds per colony where bees are in the hands of practical bee-keepers. 2. 250 colonies would be 25,000 pounds annually.

S. T. Pettit (Ont.)—1. Where the bees are properly handled, 75 pounds of comb, or 125 pounds of extracted. But the number who attain to those figures, on an average, are exceedingly few. 2. I don't know, but it would usually made a big difference.

O. O. Poppleton (Fla.)—1. I cannot answer, as my locality has not been settled by white men anywhere near 25 years—not long enough to make an estimate, but not to exceed 100 pounds. 2. I do not know. No such size of apiaries has ever been kept in this section.

Rev. M. Mahin (Ind.)—1. That is a poser. Taking bee-keepers as they are, with the methods that have been followed, I think that the average has not been more than 25 pounds. Yet I have sometimes gotten more than 100 pounds. 2. I think an apiary of 250 colonies would starve.

C. H. Dibbern (Ill.)—My average has been about 40 pounds of comb honey; some seasons a good deal more, but some seasons none at all. 2. 250 colonies would overstock my locality, as I have found by experience, and that would likely bring the average down to 10 pounds.

D. W. Heise (Ont.)—1. The average with me for the past five years is 69

DR. PEIRO,

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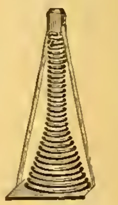

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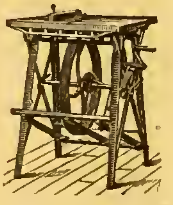

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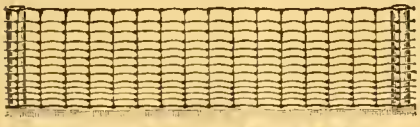

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pounds, but I think the general average would fall below that figure for the past 25 years. 2. I do not think the pasturage is sufficient in this locality for the accommodation of 250 colonies in one apiary, therefore the average yield would necessarily be very low.

The Nickel Plate Road will sell tickets to Boston, Mass., and return at a fare and one-third for the round trip, on certificate plan, account of meeting of Street Railway Association of America, Sept. 6-9, 1898. Two through trains daily, with service equal to that of any line between same points. You will save money by patronizing the Nickel Plate Road. J. Y. Calahan, 111 Adams St., Chicago, will be pleased to furnish any information relative to dates of sale, etc. Depot, Van Buren Street Passenger Station, on the loop. Telephone Main 3389. (62-35-1)

GENERAL ITEMS

Storing Surplus Honey.

I have 8 colonies of bees in good condition, and all storing surplus. I got 130 pounds of honey from 2 colonies, and sold 83 pounds for $10.40.

R. L. HASTIN.
Dade Co., Mo., Aug. 12.

Half Black Honey-Dew.

I commenced the season of 1898 with five colonies, increast to 8, and got only about 100 pounds of comb honey—one-half of it black honey-dew.

E. R. MUNN.
Clarion Co., Pa., Aug. 16.

May Get a Fall Crop.

This has been a very poor season for bees so far, but if it is not too dry from now on we may get a good crop of fall honey.

J. S. BARB.
Trumbull Co., Ohio, Aug. 16.

Must Feed for Winter.

I have 80 colonies of bees, but no honey this year. I will have to feed for winter.

W. H. DUNCAN.
Douglas Co., Kan., Aug. 17.

Short Honey Crop.

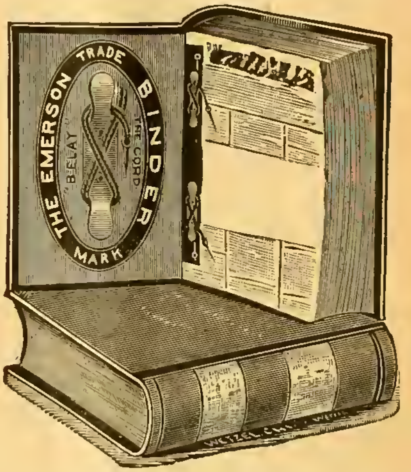
I will have a short honey crop this season, like all others in this part of the country.

D. N. RITCHEY.
Licking Co., Ohio, Aug. 16.

Raising Hive Cover for Ventilation.

I read on page 509, a scheme for ventilating hives, by Alder Bros., of Texas. This seems to be good enough for a man who has plenty of time to do all such fixings on a few hives, but a bee-keeper who has hundreds of hives could not take the trouble and time to do it. I have the 8 and 10-frame dovetailed hives, and I am living in a very warm country (Southern portion of Louisiana). Last year my bees hung out a good deal on account of warm weather and heat in the hive. This year everything is all right—I never saw one colony (have nearly 100 now) loafing or hanging out, by employing my own invention, which is very simple. It is nothing else

BEES, HONEY, MONEY
Queens for Business.
Supplies at Bottom Prices.
"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.
J. P. H. BROWN, Augusta, Ga.
Please mention Bee Journal when writing.



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WETZEL CHI

This Emerson stiff-cloth-board Binder for the American Bee Journal we mail for 60 cents; or will send it with the Journal for one year—both together for $1.50. It is a fine thing to preserve the copies of the Bee Journal as fast as they are received. If you have the "Emerson," no further binding is necessary.
GEORGE W. YORK & CO.,
118 Michigan Street, - CHICAGO, ILL.

BEE-KEEPERS ! Let me send you my 64-page Catalog for 1898
J. M. Jenkins, Wetumpka, Ala.
Please mention Bee Journal when writing

Best Basswood Honey in Barrels ✻✻✻✻

We have a limited number of barrels of **very best Basswood** Extracted Honey, weighing NET about 280 lbs. which we are offering at 7 cents per lb. f. o. b. Chicago. Do you want a barrel or so of it? If so, address, with the cash,
GEORGE W. YORK & CO.,
CHICAGO, ILLS

California.—The next meeting of the Fresno County Bee-Keepers' Association is to be held in the City Hall, Fresno, Calif., Wednesday, Sept. 14, at 10 o'clock a m. All honey-producers are requested to attend.
Caruthers, Calif. W. A. H. GILSTRAP, Sec.

Excursion to Boston.

The Nickel Plate Road will sell excursion tickets from Chicago to Boston and return for trains of Sept. 16, 17 and 18, at rate of $19.00 for the round trip. Tickets will be valid returning until Sept. 30, inclusive. On account of heavy travel at this particular time, those desiring sleeping-car accommodations should apply early to J. Y. Calahan, General Agent, 111 Adams St., Chicago. Telephone Main 3389. (58-32-6)

THE BIGGEST OFFER YET!

Last year only about one per cent—only one subscriber in 100—ordered his Review discontinued. If the Review could secure 1,000 new subscribers the present year, there is an almost absolute certainty that at least 900 of them would remain; not only next year, but for several years—as long as they are interested in bees. Once a really GOOD bee-journal visits a bee-keeper a whole year it usually becomes a permanent member of his family.

I would have no difficulty whatever in getting twice 1,000 new subscribers this year, if all of the bee-keepers in this country had read the Review the past year. I have sometimes thought that it might pay a publisher to give away his journal one year, simply for the sake of getting it into new hands. There are, of course, decided objections to such a course; but I am going to come as near to it as I dare. Here is my offer:

If you are not a subscriber to the Review, send me $1.00, and I will send you twelve back numbers, the Review the rest of this year and all of next year.

Each issue of the Review, especially if devoted to the discussion of some special topic, is really a pamphlet containing the best thoughts and experience of the best men upon the topic under discussion. Twelve back numbers of the Review are, to a certain extent, so many little books devoted to as many different phases of bee-keeping. Some issues of the Review are now out of print; of others only a few are left; while of others there are several hundred. Of course, I shall send those of which I have the most, but no two alike.

Most people subscribe for a journal at the beginning of the year. In this case there is no use of waiting, as you will get the Review for next year just the same as tho you waited until next January to subscribe, and you get all the rest of the numbers for this year FREE. The sooner you subscribe, the more free issues will you receive.

Let me tell it over once more. For $1.00 you get twelve back numbers, the Review the rest of this year, and for all of 1899.

31Dtf W. Z. HUTCHINSON, Flint, Mich.

DOING
DOUBLE WORK.

With an ordinary high wheeled, narrow-tired wagon, on the average country road a man with a single team of horses can haul a load of a ton or a ton and a half of produce. When an

...ELECTRIC HANDY WAGON...

equipped with our ***Low Steel Wheels, with Wide Tires*** is used, the load may be increased to **two or three tons**, and it will be drawn more easily by the same team for the same driver. Just stop and figure up the profit of thus increasing the working capacity of both man and team. It will amount to a snug sum at the end of the year. ***ELECTRIC LOW STEEL WHEELS FIT ANY WAGON*** and last indefinitely. Our free book, "Farm Savings" contains much of value. Send for it.

ELECTRIC WHEEL CO.
Box 16, Quincy, Ills.

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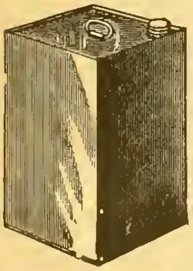
For the next 90 days we will sell warranted purely mated **ITALIAN QUEENS** at 50 cts. each; half dozen, $2.50; tested, 60 cts. each; half dozen, $3.00. Safe arrival guaranteed. Fifteen years' experience in queen-rearing.

LEININGER BROS., Fort Jennings, Ohio.
Please mention the Bee Journal. 33Dtf

$26.00 to Boston and Return

on certificate plan, via the Nickel Plate Road, account of meeting of Street Railway Association of America, Sept. 6-9, 1898. For further information, write J. Y. Calahan, 111 Adams Street, Chicago Depot, Van Buren Street Passenger Station, on the loop. Telephone Main 3389. (63-35-1)



Finest Alfalfa Honey!

IT SELLS ON TASTING.

The Honey that Suits All Who Buy It.

We can furnish **White Alfalfa** Extracted Honey, in 60-pound tin cans, on board cars in Chicago, at these prices: 1 can, in a case, 7 cents per pound; 2 cans in one case, 6½ cents; 4 cans (2 cases) or more, 6 cents. The Cash MUST accompany each order.

☞ A sample of the honey will be mailed to an intending purchaser, for 8 cents, to cover postage, packing, etc. We guarantee purity.

GEORGE W. YORK & CO., 118 Michigan Street, CHICAGO, ILL.

than that I lift the cover of the second story at the *rear* about ¼ inch, and in the middle I insert a common nail between the hive and the cover. This gives about ¼ inch air space in the rear of the hive; there is therefore a continual current of air from the entrance to the upper story in the rear, and no bees will hang out. I never have seen any robber bees going in there—even the bees do not work through this opening. By looking in, you see only guards all around the opening. I take a nail, as metal the bees will not attach to the wooden hive; and to keep the hive-cover in this position on the hive I only lay one brickbat on the middle of each cover.
J. H. HEMPEL.

Tricksters at Agricultural Fairs.

Wherever large numbers of people gather, a class of persons is usually found who make a living by deceiving the public. They have schemes and tricks innumerable that appear to be easy and simple; but in reality they are quite difficult, and in some cases impossible to successfuly perform. They have wheels and machines that are doctored to turn as the proprietor may wish to make them. They have cocoanut-headed negro dodgers to arouse the brutality in men and boys. They have tented shows which are disgusting in coarseness and vulgarity.

Among the throngs at Agricultural Fairs these leeches are out of place. They contribute nothing helpful or good. They do not add to the attraction of the fair. They do not bring desirable patrons. They do not swell the gate receipts.

They are not patronized by intelligent patrons of the fair. They are not wanted by honest farmers. They are shunned with fear by thoughtful parents. 'Because of their presence, even the fair is not patronized by many of our best citizens' families.

The harm accomplisht by these self-invited fakirs would doubtless surprise us, were it possible to gather and trace back to their door all the results of their work. They distract the thought, they divert the attention, they destroy the interest in the real work of the fair. The competitive exhibitions, the meritorious displays, the awarding of prizes, are all robbed of the undivided interest that belongs to them, and which the proprietors have labored day and night to develop.

The morals of the country suffer seriously, we believe, from actions and words that, without warning, are sprung upon inquisitive audiences in the tent shows.

We are glad to see that a strong effort is being put forth this season to keep these objectionable features out of the grounds, and the attitude of managers is encouraging.
E. B.

Minnesota.—The adjourned meeting of the Minnesota Bee-Keepers' Association will be held on Wednesday forenoon during State Fair week, at the place where the honey exhibit is made on the fair grounds. Make an effort to be there, and invite other bee-keepers who are not members to come and join the Association.
L. D. LEONARD, Sec.
Minneapolis, Minn.

Don't Forget

the excursion to Boston over the Nickel Plate Road, Sept. 16 to 18, inclusive, at rate of $19.00 for the round trip. Good returning until Sept. 30, 1898, inclusive. Tel. Main 3389. (61-32-6)

A SELECTED MOTHER .:.

Editorial on page 589 "Gleanings" says: "We are rearing queens from an Alley queen, whose queen-daughters are beautiful as well as her bees. They are hardy, prolific, and hold their own with any colony for honey." Queens, $1 each. **HENRY ALLEY, Wenham, Mass.**

33Atf Please mention the American Bee Journal.

The Bee-Keeper's Guide

This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style, The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."

Given For 2 New Subscribers.

The following offer is made to PRESENT subscribers only, and no premium is also given to the two new subscribers—simply the Bee Journal for one year:

Send us **Two New Subscribers** to the Bee Journal (with $2.00), and we will mail YOU a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both together for only $1.75. But surely anybody can get only 2 new subscribers to the Bee Journal for a year, and thus get the boo as a premium. Let everybody try for it' Will you have one?

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

Page & Lyon Mfg. Co. New London, ——Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

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......To have a copy of......

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Special Agent for the Southwest—

E. T. ABBOTT, St. Joseph, Mo.

Mr. Abbott sells our Hives and Sections at factory prices.

Ho, for Omaha!

As we have many customers in the Northwest, and believing they will appreciate the low freight rates obtained by purchasing goods from a railroad center nearer to them than we are, getting a direct through-freight rate, thus cutting the freight in half, we have establisht a branch house at 1730 South 13th St., Omaha, Neb., where we will keep a complete line of all Apiarian Supplies, the same as we do at Higginsville, Mo. With the quality of our goods, we believe most bee-keepers in the West are already acquainted, but to those who are not, we will say that our goods are par excellent. Polisht, snowy-white Sections, beautiful straw-colored transparent Foundation, improved Smokers and Hooey Extractors, and all other first-clas sgoods, are what we sell. Kind and courteous treatment and honorable dealing our motto. On these bases, we solicit an order, feeling sure that if we sell you one bill of goods you will be our customer in the future.

☞ PROORESSIVE BEE-KEEPER, 50c per year. "Amateur Bee-Keeper," 25c. Both for 65c. postpaid. Sample copy of the PROGRESSIVE free, and a beautiful Catalog for the asking.

Address, Leahy Manufacturing Company, Higginsville, Mo., or 1730 South 13th St., Omaha, Neb.

Please mention Bee Journal when writing.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Aug. 18.—The new crop is now coming forward and meets with a fair demand. Best grade of white comb honey in 12 to 24 section cases, 12c; that which is faulty, 10 to 11c; ambers, 8 to 10c; dark, 7 to 8c. Extracted, 5 to 7c for white; 5 to 6c for amber; 4 to 5c for dark. Beeswax, 27c.

R. A. BURNETT & CO.

Kansas City, Aug. 23.—Fancy white comb, 13@14c; No. 1, 12@13c; amber, 11@12c. Extracted, white, 5½@6c; amber, 4½@5c. Beeswax, 22@25c.

We are receiving few shipments of new comb and extracted honey. The demand is good for this time of the year.

C. C. CLEMONS & CO.

New York, Aug. 26.—We have a good demand for new crop comb honey, and it is beginning to arrive. Have sold some shipments at 14 to 15c for fancy white, 12 to 13c for No. 1 white, and 10 to 11c for fair white. We think these will be about the ruling prices this fall; exceptional fine lots may sell at a little more. Extracted is in good demand at unchanged prices. Beeswax dull at 26 to 27c.

HILDRETH BROS. & SEGELKEN.

Boston, Aug. 19.—Fancy in cartons, 13c; A No. 1, 11@12c; No. 1, 10@11c; No. 2, 9c.

New comb honey is now coming in, and while the demand is light owing to the warm weather, yet it is being well taken. Extracted, very little California on hand, and selling readily at 6½@7½c. Florida now arriving and selling at 5@6c. White clover scarce and wanted. BLAKE, SCOTT & LEE.

San Francisco, Aug. 10.—White comb, 9 to 10c; amber, 7 to 8½c. Extracted, white, 6@6½c.; light amber, 5½ to 6c. Beeswax, 23@25c

Although stocks are very light, the quality of this year's crop is of a much higher average than was generally expected, considering the dry season. There is some of this year's product which is of exceptionally fine quality. Market is firm at quotations.

Detroit, July 21—Fancy white, 11@12c; No. 1, white, 10@11c. Extracted, white, 5@6c; dark, 4@5c. Beeswax, 25@26c.

New honey is arriving, but prices are hardly establisht. M. H. HUNT.

Minneapolis, July 26.—Fancy white clover comb is now selling at 11@12c.; amber, 10½c. Extracted fancy white clover, 5½c.; amber, 4¾@5c. Dark grades, both comb and extracted, not wanted at low prices.

S. H. HALL & CO.

Indianapolis, July 18.—Fancy white comb honey, 12@12½c; No 1, 10@11c. Extracted, white, 6@7c. Beeswax, 25@27c.

Only a few arrivals of fancy white comb; market almost bare, and demand good. Quite a little comb honey from honey-dew is being offered, but there is simply no demand for the stuff. WALTER S. POUDER.

Milwaukee, Aug. 18.—Fancy comb, 11 to 12c; A No. 1, 10 to 11c; No. 1, 9 to 10c; amber, 7 to 8c; old and dark, 5 to 6c. Extracted, white, in barrels or kegs, 5 to 6c; dark, 4 to 5c. Beeswax, 25 to 26c.

The market for honey is in very good condition; while there is yet a little of the old crop on hand, it is in very good order, and some demand, which will clear off everything before the new crop will arrive, very plentifully. There is already some receipts of new, but mostly extracted, and some very good quality, yet we fear the danger is in extracting too early, before the honey is fairly ripened. We anticipate a good demand a little later, and think values will remain about the same as present quotations. A. V. BISHOP & CO.

Buffalo, Aug. 12.—Fruit prevents a large demand for any kind of honey at present. A few cases of fancy one-pound new comb can be sold daily at 11@12c; but any grade below must be urged at proportionately lower prices. Would advise writing us before shipping here. There is no demand yet for extracted BATTERSON & CO.

St. Louis, July 9.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.

WESTCOTT COM. CO.

Cleveland, Aug. 3.—Fancy white, 13@14c; No. 1, white, 12@12½c; light amber, 11c; buckwheat, 9c. Extracted, white, 7c.; light amber, 6c.

The demand for honey is exceptionally good, owing to the crop in this vicinity being very light. A. B. WILLIAMS & CO.

The Usual Fall Discount ✲ ✲ ✲ ✲ ✲

Is Now Allowed on Orders.
If you want.....

Shipping Cases, Crates, Extractors,

Or anything else, write to us. Catalog Free. Sample Copy

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THE W. T. FALCONER MFG. COMPANY
JAMESTOWN, N. Y.

Please mention Bee Journal when writing.

I. J. STRINGHAM,
105 Park Place,
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KEEPS IN STOCK A FULL LINE OF

APIARIAN SUPPLIES

1-pound Square Jars, $4.60 gross.
Labels, 60c gross; disc. on quantities.
Italian Queens, 65c each.
Catalog **FREE.**

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We want the name and address of every Bee-Keeper in **America.** We supply Dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment.

Write for Catalogs, Quotations, etc.

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The A. I. Root Co.'s Goods Wholesale. Retail.

Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**
Cash for Beeswax. BELL BRANCH, MICH.

Please mention Bee Journal when writing.

I ARISE

TO SAY to the readers of the BEE JOURNAL that **DOOLITTLE** has concluded to sell —BEES and QUEENS— in their season, during 1898, at the following prices:

One Colony of Italians on 9 Gallup frames, in light shipping-box	$6 00
Five Colonies.....	25 00
Ten Colonies......	45 00
1 untested queen.	1 00
6 " queens	5 50
12 " "	10 00
1 tested Queen...	$1 50
3 " Queens.	3 50
1 select tested queen	2 00
3 " " Queens	4 00
Select tested queen, previous season's rearing..	3 00
Extra Selected for breeding, THE VERY BEST..	5 00

About a Pound of BEES in a Two-frame Nucleus, with any Queen, $2.00 extra.

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☞ Circular free, giving full particulars regarding the Bees and each class of Queens.

Address
G. M. DOOLITTLE,
11A25t BORODINO, Onon. Co., N. Y.

21st Year **Dadant's Foundation.** 21st Year

Why does it sell so Well?

Because it has always given better satisfaction than any other.
Because **IN 21 YEARS** there have not been any complaints, but thousands of compliments.

We Guarantee Satisfaction.

What more can anybody do? **Beauty, Purity, Firmness, No Sagging. No Loss. PATENT WEED PROCESS SHEETING.**

Send Name for our Catalog, Samples of Foundation and Veil Material. We sell the best VEILS, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

LANGSTROTH ON THE HONEY-BEE, Revised.
The Classic in Bee-Culture—Price, $1.25, by mail.

BEESWAX WANTED
AT ALL TIMES.

CHAS. DADANT & SON,
Please mention the Am. Bee Journal. **HAMILTON, Hancock Co., ILL.**

OUR MOTTO—"Well Manufactured Stock! Quick Shipments!"

SECTIONS, SHIPPING-CASES,
—AND—
BEE-KEEPERS' SUPPLIES.

We make a specialty of making the very best Sections on the market. The **BASSWOOD** in this part of Wisconsin is acknowledged by all to be the best for making **the One-Piece Honey-Sections**—selected, young, and thrifty timber is used.

☞ Write for Illustrated Catalog and Price-List FREE.

MARSHFIELD MFG. CO., Marshfield, Wis.

Please mention the American Bee Journal when writing.

ROOT'S GOODS.

Our Specialties:
- The Fence and Plain Sections.
- Weed New Process Foundation.
- Cowan Extractors.
- Porter Bee-Escapes—the best made.
- Dovetailed Hives—with Danz. Patented Cover and Bottom.
- Danzenbaker Hives.
- No-Drip Shipping-Cases.
- Gleanings in Bee-Culture, Illustrated, Semi-Monthly.

Catalog of Goods and Sample Copy of Gleanings sent for your name on a postal.

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AMERICAN BEE JOURNAL.
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

Publisht Weekly at 118 Michigan St. George W. York, Editor. $1.00 a Year—Sample Copy Free.

38th Year. CHICAGO, ILL., SEPTEMBER 8, 1898. No. 36.

CONTRIBUTED ARTICLES

No. 6.—The A B C of Marketing Honey.

BY HERMAN F. MOORE.

[Continued from page 549.]

While we were in Toledo we took occasion to run out to see Dr. A. B. Mason, well known to all bee-keepers. I had some misgivings lest the genial Doctor would think I was intruding upon his "preserves," but he assured me that my systematic drumming up of the honey consumers of Toledo would inure to his benefit, for I would, no doubt, get many people to using honey who never had before, and when I was gone they would come to him for further supply.

I think in general the producers of honey need feel no jealousy of each other for the "harvest [of buyers] is great and the laborers are few," speaking generally.

In almost any part of the country you will find unoccupied territory, if you look for it, and where your work will bring a good return.

If by chance two or more of you are occupying ground so near that your interests seem to conflict, get together and agree upon your shares of the territory, and also on prices alike as nearly as possible.

In case you are unable to agree, never try to injure a competitor, but compete in an honorable manner, charging fair prices, and giving better stuff than any one else, if possible.

Never slander your rivals in business, and a good business man has said, "Don't advertise them in *any way*." If you cut prices or abuse your competitors, you will injure yourself more than them.

There is an advantage you will find in working the large towns in your locality more closely than the small ones. You can generally get more per pound for your honey, and can deliver larger amounts at a time with less travel. Also, you will be more likely to find in large towns and small cities wholesale dealers in everything you may need in glass or tin ware, and they will usually give you the same low prices they give to grocers and tradesmen. You will need to introduce yourself, and explain that you are buying to sell again, and as a rule you will have no trouble in getting almost the lowest wholesale prices on everything. This matter of buying such things as you need as cheap as possible is very important.

In the cities the great stores pay large salaries to their buyers, and can well afford to do so, for a good buyer can save several times his pay in a single year.

If possible buy 100 or more at a time, of any article you may need, as by so doing you are more likely to get a low price. Business men and dealers don't always tell the truth about articles they sell, but you can call upon different dealers in the same line, and you will very soon find out the facts in any case where you are interested.

After several months of pretty thorough work in Toledo, we began to feel as if pastures new might pay better for a time. So trips were made to Zanesville, Columbus, Canton, Akron, Massillon, Cleveland, and later on Ft. Wayne, Lafayette, Logansport, Indianapolis, in Indiana. I believe in Ft. Wayne was the only place that I was requested to pay a license. You will remember our method of selling honey could not be correctly described as peddling, but selling by sample for future delivery, usually called soliciting. Under the laws of most of the States those who sell by sample are exempt from license charges, but Ft. Wayne was a law unto itself in this case, I believe.

The best course in such cases is to pay the license. You cannot afford to spend your time and money contesting their right to tax you; and you can rest assured that no great time will pass before some one with plenty of money and fighting qualities will test such a law if there is an opportunity to do so.

Right here it may occur to you to ask, "What shall I do about adulterated honey found in retail grocery stores?" If your own good only is in view—I mean your own selfish interest—I say, do nothing; for the more poor stuff the grocers sell under the name of honey, the better your trade will be, and the more sure you are of lasting success.

I think three-fourths of my trade has been from people who were afraid of buying impure honey from the store.

You may ask, "What is best for the producers of honey as a class in regard to this matter of selling impure honey by the dealers?" My judgment is that if it were possible to supply all honey for use on the table directly from the producer to the consumer, that there seems no doubt but that the adulteration of honey must cease entirely. There seems no doubt but the poor quality of store honey as a rule works directly into your hands as producers, if you sell your crop to the family trade alone.

Herman F. Moore.

In your travels selling honey it will be a constant surprise to you how much you have to learn. When you start out your bump of self-esteem may be quite well developt, but the longer you deal with the great public the more modest you will become if you are the right sort. In fact, you will find that a teachable disposition and a willing mind are necessary to success in this as in many other undertakings. If on searching yourself you are unable to find these qualities, there is no need to begin. The old ideas that "anybody can farm," "anybody can keep bees," "anybody can sell honey," have been long since exploded. Constant study, constant vigilance, constant work, are necessary in order to the greatest success in anything, and no less so in selling honey than in any other department of human industry.

It may be a hard question to answer why "Do you want to buy some honey?" won't sell much honey for you in any place on earth, but it won't. One reason is the constant variety of ways in which the wholesale dealers approach their trade. People get used to being amused and expect it, and if you intend to make a success where another man made a failure, you must study up new ways to amuse and instruct and educate the people. There is no business which affords greater opportunities for this than selling honey. Your bee-hives, your apiary, your honey-house, are chock-full of things about which the general public knows almost nothing. You will find that the head of a great business house will listen, like unto a fairy tale, to your account of rearing a queen-bee in a hive, especially when illustrated by a queen-cell in your hand.

When you start out to-morrow morning, take along with you a brood-frame selected from one of your hives. You will need one that has no larvæ or sealed brood in it. Also take one that has some drone-comb on the lower edge, also one or two queen-cells that have been used, that is, that have hatcht queens. You can get a very nice comb by inserting in a strong colony a brood-frame with half sheet of foundation and leave in two days and then remove it.

People are very curious about the "manufactured comb," as they call it. If you put in a half sheet of starter, as suggested, a good way would be to protect one-fourth the length by thin pieces of boards, so as to keep the bees from drawing it out. Then people can see just what you give the bees and just what work they do upon it. This will save you lots of words of explantions that would otherwise be necessary.

My first call is on a man in the leather business I have known for years. A salesman sitting at his elbow greets me with, "Oh, that is some of the manufactured honey, is it?" I hold up the brood-frame fresh from my bee-hive, covered with propolis in spots and adorned with burr-combs of greater or less size. I say, "Would you accuse a man of fooling his time away sticking beeswax all over on the edges of the wood? What do you think of this red, sticky stuff? Do you think that adds to the beauty? That we call bee-glue, and a nasty stuff it is. This frame is just as the bees built it in my bee-hive, except the nails and wood and wire. We make them very strong, as they are part of our capital. We use these frames 15 or 20 years in our hives if we chance to keep bees so long. Just look at this red, yellow, blue and green stuff in the cells of comb. That is bee-bread. The bees store that in the combs to feed their young. Why, my dear sir, this frame of honey-comb bears upon its face the impress of the insects' work, just as much as the spider's web; and you might just as well say, 'Oh, that is a manufactured spider's web,' as to say so about this honey-comb. Just notice the bridge or trestle work construction where the honey-comb is fastened to the wood. A man can't fasten wax to wood in any such way. Look at the six-sided shape of the little wax-buckets the bees have built to hold their winter's supply of honey. Did you notice these big cells on the lower edge of the frame?"

"What are those?"

"Those are cells to rear the male bees in the bee-hive. Poor fellows, they have no sting to fight with, no honey-sac to gather honey—they don't know how to work wax or feed young bees or gather pollen; and just as soon as the honey-flow in the flowers stops, they are all put to death without remorse."

"What is this funny looking thing on the edge of the comb?"

"That is a queen-cell. The bees take any worker-egg, build around it one of these big black cells, and feed it five times as much as it can eat, and it hatches in 16 days into a perfect female, capable of laying 2,000 to 3,000 eggs a day in the busy season of two or three years of her life. It would have taken 21 days for this same egg to hatch in the *little* cell when fed less bountifully."

"Isn't that wonderful?"

"Yes, sir, that is truly strange even to us who work with the bees constantly, and handle them fearlessly. The study of the bees brings forward new things unlimited in number, even tho you spend your life among the bees."

"Then, do you mean to say that men don't make comb honey, fill it with glucose, and wax the cells shut with a hot iron, as I have read it in the papers?"

"Yes, sir, I say it can't be done. Men are mean enough to do anything, but they can't put the wax together that way at all, and even if they could the cost would be too great. Could you make a honey-comb like this for one dollar, labor and material? I think not; but my bees made it for 20 cents or less. Can even the cheap Chinese or Japanese compete with that? I think not. And as to capping wax with a hot iron, that is too ridiculous. Try your hot poker near some honey-comb; it will melt away like frost under the sun."

[Continued next week.]

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The Thumb-Tack Method of Keeping a Record of the Operations in the Apiary.

BY JOHN ATKINSON.

Several years ago D. D. Palmer, in the American Bee Journal, advocated the use of small slates with holes drilled in one end to hang them on a nail or screw on the back of the hive for this purpose. I myself use wooden tags in the same way, planing them off when they get full of writing; and various other devices, such as Root's queen-registering cards, have been and are being used for recording purposes.

But we often wish to mark frames as well as hives, especially in queen-rearing operations. For this purpose Mr. Doolittle and Mr. Alley, in their books on queen-rearing, tell us to scrape off the wax and propolis from the top-bar of a frame, or take off a shaving and write dates, etc., on the top-bar. You scrape a bar or two and your knife becomes so dull it won't scrape worth a cent. If the bar is not well scraped you can't write on it worth a cent. (Did you ever try it, and refrain from profanity? Then you are a daisy.) You think you will "take off a shaving." The top-bar is a little cross-grained, and, of course, you happen to start the knife the wrong way of the grain, and it's a cold day if you do not split the top-bar in two. Then, at the next operation this all has to be done over again, and finally you have taken off so many shavings that the frame is practically spoiled, and, of course, contains a nice, straight, worker-comb which you don't want to lose or transfer into another frame. In short, there is no satisfaction, but lots of disappointments and heart-burnings in this method of keeping a record.

Palmer's slates for the outside of the hive were well enough as far as they went, but he had to make them by removing the frames from school slates and sawing the slates into small pieces and drilling the holes, thus paying for frames only to throw them away, besides probably spoiling saws and breaking slates in drilling.

Root's queen-registering cards are probably very handy for keeping a record of the transactions on queen-rearing nuclei, but the pins may easily be moved by accident, thus knocking your record into a "cockt hat," and any cards are easily spoilt by the action of the sun and rain.

Doolittle keeps some kind of a record with small stones placed in certain positions on the hive-cover. So do I. I open a hive; in doing so I tip the cover a little, off roll the stones. (Don't talk to me about *flat* stones—we haven't got 'em in this "neck of the woods"), and unless I can remember how they were placed, my record is again gone to the "demnition bow-wows." Anyhow, I have to pick them up and replace them.

What am I going to do about it? Well, I can't do anything but make a suggestion, which is this: That some of the manufacturers of apiarian supplies get us up a set of thumb-tacks similar to those used by draughtsmen to hold their paper on the draught-board, with numbers from 1 to 31, for the days of the month, or more if hives are to be numbered with them, and all the letters of the alphabet stampt or cast in the metal of the tack-heads, put up in boxes or "fonts" containing each several alphabets and several sets of numbers, the box to have a convenient handle attacht so that it can be easily carried in one hand from hive to hive.

These thumb-tacks can be easily placed upon a hive-body, the top-bar of a frame, or anything else, and as easily pickt off with the thumb-nail and dropt into their proper compartment of the box, and this can be done much quicker than any writing, either on slate, wood, or pasteboard; would be impervious to the action of the weather; where used on top-bars of frames it could be easily cleaned of propolis by soaking for a short time in gasolene; would last a life time if properly cared for—in short they would, in my humble opinion, "take the bakery."

On page 439, our Boller gives a quotation from Gleanings, of Mr. Doolittle's management of pollen-filled combs; says white clover pollen has honey stored over it, and is saved till spring, "care being taken as to worms." I have lots of such combs now in which the bees are just covering the pollen with honey. They will be sealed over after awhile, and if in new comb the pollen may be seen by holding the combs up to the light; but if in old, black combs it cannot be detected after the cells are sealed. Now, if I had a lot of thumb-tacks with the letter P on their heads, I could stick one on the top-bar of each such frame and let it remain there till spring, leaving the comb in the hive without any "care as to worms," and next spring I could put my hand right on it when wanted. See!

Like Dr. Miller, I keep a "queen-book" in which is recorded the age, race, strain, etc., of queens, but in order to keep track of them it is necessary to know "where they are at." I don't like numbering the hive-bodies, as it is an odd trick of mine, when handling a colony, to move it off the stand, placing an empty body on the stand, and handling the frames over into it; and my numbers would have to be constantly changed; therefore I number the stand by driving a flat stake of hard wood into the ground at the back of the stand. I number these stakes with a hammer and cold-chisel, using the Roman notation. When it comes to, say, XXXIX, there is considerable chiseling to be done. Oh! for a thumb-tack to stick on the head of that stake, and save all that "monkey work!"

When the hives are placed in the cellar for winter, a corresponding number on a thumb-tack could be stuck on the hive-body, and every hive placed on its old stand in the apiary, if desired, with just no bother at all. And there are a thousand and one other places where they could be used with pleasure and profit to the apiarist.

Words, instead of single letters, could be used to designate certain operations, abbreviating the longer words. For instance, when a queen commences to lay, a tack with the word "eggs" on it, in connection with another containing the date, would be sufficient. "Q'l's" would answer as well as the word "queenless" in full, and so on, *ad infinitum*.

The body of the tack ought to be short, perhaps not more than ¼ of an inch, while the head could be from ⅜ to ¾ of an inch in diameter, the latter size, perhaps, the best.

Hi, there, you "Rootvillians!" You windy fellows who stamp "A. I. R." on everything you make, here's the "root" of an idea which I should like to see you make

"Bravely to burgeon, and broadly to grow,"

till we should have a system of keeping records of operations in the apiary easier, quicker, and more effective than any I have yet seen. Will you help us out? Or, if you won't, will some one else? Perhaps you think I have "thumb-tacks" on the brain. Well, I haven't got them any more than I have "bees in my bonnet." If you object to thumb-tacks "on the brain," please give them to us in a box, as outlined above. The old Scotchman's advice to his son, "Be aye sticking in a tree, Jock; it'll be growing while ye're sleeping." I would modify thus: Be aye sticking in a thumb-tack, Jock, it'll save ye lots of heart-burnings.

At any rate, for all kinds of records which are kept on the frames, these tacks would be invaluable, as it is almost impossible to make a legible mark with a lead-pencil on wood which has the least bit of wax or propolis on it; and constant cutting or shaving off the frames is, to say the least, bad practice; and lots of time can be saved by being able to put your hand on the frame you want at once, without having to handle a number of frames to find it; while the time saved over scraping and writing is no small item of itself.

Crow Wing Co., Minn.

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A Consideration of Extracting-Frames.

BY S. A. DEACON.

"Who shall decide when doctors disagree?"

That great English bee-master—Mr. S. J. Baldwin—says in his "Bee-Keepers' Instructor:"

"Shallow frames for supers are recommended by some as the best for extracting purposes, and they would have you believe that by their use an increast harvest of honey may be secured. That the bees can fill a 5-inch comb quicker than one of 8 inches is, of course, undeniable, but I fail to see the advantage of having a given number of the former filled in, say five days, if the same number of the latter are filled in eight days. My experience has proved that this is the case, and, therefore, I contend that there is an immense advantage in using one size of frame only for all purposes. The necessity for extracting and interference is less frequent, vexatious complications are prevented, and, above all, swarming may be more easily controlled, as the combs from the top hives, after extracting, can be exchanged for those below, and thus the cause of swarming removed."

It would not appear to have occurred to Mr. Baldwin that there is not likely to be much, if any, swarming after the season's honey is extracted! And tho I do not profess to know much about it—my object in penning these remarks being, in fact, to elicit information from those far more experienced than myself in the production of extracted honey—still, I should think that to remove two or three hundred of Mr. Baldwin's 10-deep-frame supers full of honey, from apiary to bee-house, would necessitate the laying down of a tram along the rows of hives, and the erection of a traveling crane! Is it to this *weighty* objection that we owe the universal use of shallow extracting-frames in the United States? Or, on what ground have they the preference? Be the cause what it may, what I particularly wish to know is, what decided A. I. Root, for instance, to make the dovetailed hive's extracting-frames only 4½ inches in depth; and the Dadants, for instance, to make theirs 6 inches? I suppose there is some intelligent explanation; if so, will Mr. E. R. Root or Mr. C. P. Dadant kindly furnish it—and obligingly reply to this, as also to what follows, in the columns of the American Bee Journal?

In anticipation of their reply I may say that I have in my mind a very humorous picture which appeared some years ago in the London Punch. An amiable-looking old gentleman is seen at the door of a marquee greatly interested evidently in the cricket match being played. He seeks information from an athletic but not highly intelligent looking cricketer as to the meaning, or origin, or cause of use of a certain term used by the players, thus:

OLD GENT—"Why is a ball like that called a 'Yorker,' sir?"

PROFESSIONAL PLAYER—"A 'Yorker,' sir? Oh, when the ball's pitcht right up to the block,"—

OLD GENT—"Yes, yes—I didn't ask you *what* a 'Yorker' is"—(with dignity)—"I know that as well as you do. But *why* is it called a 'Yorker?'"

PROFESSIONAL PLAYER—"Well, I can't say, sir. I don't know what else you could call it."

It may not be very complimentary to either Mr. Dadant or Mr. Root to say that I expect no more intelligent an answer to my query than, "Well, I don't know what else depth you could make them;" but, really, I find it impossible to conceive any intelligent reason for fixing upon either of these two greatly-varying sizes. If the frame used by such veterans in the pursuit as the Messrs. Dadant is the best size, what defence can the A. I. Root Co. offer for giving us those *extremely* shallow frames? What has governed the choice of these particular sizes in either case? Is it due to the fact that in the case of Root's dovetailed hive two supers are just equal in size to one brood-body? I fail to see any advantage in that—whatever it may have for the supply manufacturer—and think it would have been more sensible to have made the frames 5½ in place of 4½ inches, so that two would go easily into the extractor-basket—Cowan's. Dadant's frames, again, are a trifle too deep to admit two in this basket, which I find measures 11½ inches—thus taking comfortably two of the Heddon frames, and which are of the sensible depth of 5⅜ inches. Root's—*i. e.*, the dovetailed hive's extracting-frames—are *absurdly* shallow.

Another matter in connection with extracting-frames: An important consideration in the construction of an extracting-super and its frames is, one would think, bulk and weight; that it should be as light and handy as possible, commensurate with the requisite strength. Those obtained from the supply dealers are unnecessarily heavy, with their ⅞-inch sides; ⅜ inch being thick enough for anything, the ends only being ⅞ thick, and cleated with perpendicular pieces ⅜x2 at each corner. That is how I make mine; and put together with 2-inch wire-nails, they will last quite as long as the unnecessarily heavy, clumsy dovetailed Root super. The cleats afford so much surface, or such a thickness for nailing, that they are less liable to warp than are even the thick sides of the dovetailed super.

These thin sides allow, moreover, of 9 frames in the super, in place of the now too loosely fitting 8; and it would allow of another *very* necessary improvement, viz.: increast width of the shallow extracting-frames by 1/16 of an inch each. As it is, these extracting-frames are the same width as the brood-frames, whereas they should, or might with advantage, be fully ⅛ inch wider; for the veriest tyro at bee-keeping knows that the honey-combs are always built thicker than the brood-combs. This extra width would, moreover, save 10 percent of the labor of capping and putting in and taking out frames in process of extracting.

Another fault with the dovetailed super is, that the side frame lies close against the side-wall of the super; whereas two little cleats, or offsets, 3/16 inch thick, should be tackt snugly into the corners, keeping the side or end frame that distance away from the sides of the hive, and allowing space for the bees to fill that frame as plump full as the others. In short, the whole thing is as slipshod and faulty an arrangement as can well be; unnecessarily heavy, frames too shallow and too narrow, and these offsets wanting.

Altho it would be the very height of presumption for me to call in question the wisdom and correctness of such experienced veterans as the Messrs. Dadant in the construction of their appliances and fixtures, still I am puzzled exceedingly to know why they make the top-bar of their shallow extracting-frames as heavy as those of their very deep brood-frames, viz.: 1⅛ inches square. Does not this add unnecessary size, and consequently weight, to the super? If Messrs. Dadant can assign good reason for having these top-bars so enormously thick and heavy, then Root *again* must be wrong; for in proportion to the depth of the "dovetailed's" extracting-frame its top-bar should be nearly an inch thick in place of ¼ of an inch, as now made.

Nor is it easy to understand why the Dadants use such a thick bottom-bar—both for brood and extracting frames—viz.: ½ inch square, where Root's bottom-bars are only half that thickness, or ¼ inch. We may be assured that were there not good and sufficient reason for the use of these *seemingly* unnecessarily thick bars the Messrs. Dadant would not increase the size and weight of their supers by using them; hence Messrs. Root are here, we must assume, again wrong. There is no gainsaying the experience and the intelligence which guides and directs the Dadants in even the minutest particular connected with their system of honey-production; and we must admit them to be standing authorities in the matter of producing *extracted* honey; hence, more satisfaction would be given to their customers were supply manufacturers to take their cue from such men, and make their goods in accordance with what the very many years of intelligent practice have decided to be best. As it is, this divergence of opinion (in many small, yet important details) among our recognized experts is, to say the least, confusing to the intellect of the average bee-keeper who is anxious to conduct his business aright, and in accordance with the methods most approved by men of long experience, and who have brought a high order of intelligence to bear upon their, and our, pursuit.

South Africa.

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The Use of Comb Foundation.

BY E. R. MAGOON.

I should like to reply to S. A. Deacon's article, on page 579 (1897), headed, "Comb Foundation—Is its Use Profitable?" If the author of that article is a practical and experienced bee-keeper he must know from observation and experience that the use of comb foundation is very profitable for the bee-keeper, both in the brood-chamber and super.

As to whether it will take 20, or even 6, pounds of honey to make one pound of comb or wax, I shall not say, but I am of the opinion that we lose, or fail to get, more than six pounds of honey by the bees having to produce one pound of wax. To help prove my assertion I will mention a little experience I had last season (I had the same experience many seasons before).

I hived a large swarm in a 10-frame hive, each frame being filled with nice, clean comb. I placed the hive on scales, and balanced the scales early the next morning. At night they tipt the beam at 12¼ pounds gain, and 7½ the next day. Now I am of the opinion that had the same swarm been put in an empty hive the gain would have been 2½ to 3 pounds. That had been my experience in previous tests.

Another assertion that I consider altogether misleading, and as far from the truth as the east is from the west—"That the bees go on producing wax whether they need it or not; and if we furnish them foundation the wax-scales are dropt on the floor of the hive, etc."

Now I know from personal observation that the bees do not produce wax (to amount to anything) unless it is needed for comb-building or filling cracks. Also, that the bees do draw out the extra wax in the sidewalls of foundation and build it into the comb, so that not one particle is wasted; I have watcht the process by frequently examining foundation of bright yellow wax, that the bees were building into comb, and I could see just how far the wax extended in the comb; and in some cases there was wax enough to nearly finish the comb. I nor any other manufacturer of or dealer in comb foundation ever claimed that the foundation furnisht all the wax necessary for the completion of the comb.

Mr. D. wants to know if the use of foundation is as advantageous as it is supposed to be. I answer yes, and even more than it is popularly supposed to be, or there would be more used, or it would be more generally used. I believe we get enough more honey to pay the extra cost of foundation, and get nice, straight worker brood-combs to boot.

Athens Co., Ohio.

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Improving Stock—Methods of Selection.

BY W. A. VARIAN.

Improvement of stock and methods of selection are subjects in which there seems to be a little burst of interest at present. I am just through my swarming season, and while it has been going on I have been reasoning on the occurrences as they went. I have been running by the natural-swarm system, commencing with 38 colonies and increasing to 66. I lost seven swarms that I knew of, and some more that I did not see go. Before the season was nearly over I saw I should not have hives enough for near all the swarms cast, so I began to double in nearly every case; in two or three cases where the bunches were small I put in three, and even turned the hive on double swarms when I knew where the last one came from; and with all this doubling I have as yet to find a colony that is queenless among them.

What has imprest itself on my mind is the quantity and thoroughness of forced natural selection put through in running an apiary in this fashion. Of course the contests of the queens are but seldom on even terms, so the work done in selection for vigor is not as great as it looks at first. I should expect that where an old queen and a virgin were hived together the young one is killed. But in all cases where two laying queens, or two virgins, are hived together, the most active and strongest is the one that survives.

Then there is the natural selection of wintering (which paralyzes weakness). Of course this applies to all apiaries whatever way the bees are managed.

It appears to me that the selection for vigor that goes on in hives under this system must be very great. This safeguard against degeneracy is totally absent in all kinds of artificial increase and non-swarming systems; therefore, some form of artificial selection should be practiced. I suppose that a nucleus is a requisite in nearly every apiary (at least where they de-wing the queens and cut queen-cells), and the eggs, brood and bees used in forming the nucleus we can generally count on being taken from some of the stronger colonies, and give part of the improvement or maintenance of vigor, but I do not think to as great an extent as in the natural system, so they ought to be requeened from specially selected stock once in awhile.

I think the improvement caused by natural selection in the stock of some of the old-timers who have, and still follow, the natural-swarming plan is the chief cause of the great crops of honey they sometimes produce. At least that, and being rapid, easy workers in the apiary themselves.

The preceding paragraphs were written before I received and read the Bee Journal for July 21, and Mr. Crane's article, which pleased me greatly. I look on it that the producers of the honey crop should be able to weave into their systems of management, automatic selection for honey crop—or productiveness—by rearing all extra queens from those colonies which fill the supers and work the extractor. And that the other selection for vigor will be attained by the better wintering of the stronger, and the occasional doubling of swarms. All special variations, such as color, length of tongue, size, quietness, and such things, are in the domain of the queen-breeder, and to be introduced by purchase when produced.

Weld Co., Colo.

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The Golden Method—A Swarm-Hiver.

BY L. A. SYVERUD.

On page 483, Mr. S. A. Deacon seems to ridicule Golden's method of producing comb honey, and further says he cannot see how there can be any difference between this and the old method of putting back swarms. I think there is a wide difference between the two. First, it will be the same as to provide the bees with a new home, to hive them in the supers, as they will be settled down and have begun work by evening of the same day as hived, when the brood-chamber is set on top. By the old way of putting the swarm back they will only try the same thing over again, or else hang around and do nothing, as a rule.

Secondly, you will save the expense of an extra hive; and taking into consideration the extra labor to tend to the larger number of colonies with a greater amount of winter stores required for the two, this must be economized as much as possible in order to get the most out of poor pasturage.

It is, however, somewhat difficult to manage to get the bees to swarm at the proper time, which is right in the beginning or during a honey-flow. If no honey is coming in it will prove a failure; and I came very near abandoning the method last season before giving it a second trial, as the few I tried swarmed two weeks before the main flow, during which time they gathered no honey. Besides I was not prepared for the trial—did not have a decent hive, nor a single queen's wing clipt.

This season I was better prepared, and as a comment on Golden's method I will say that hereafter I expect to follow it altogether, when possible, as this season I gave it a second trial and found it entirely satisfactory.

I cannot give the number of pounds obtained by the above method over those hived in brood-chambers (as I kept no record), but I am satisfied they gave me one-half greater yield than the others.

Mr. Deacon says he expects as much pollen in the sections as honey. I wish to say that in not a single section could I detect the least speck of pollen, and the comb and honey was as nice as you could wish for. Mr. D. should try a couple or half dozen colonies next season; I am sure he will be pleased with the results.

Mr. Golden says he never saw an egg in a section cage after her five days' confinement. In two cases out of three I found them literally filled with eggs—two to four in a cell.

I do not like the double super. I use two supers of the ordinary size, and next to the cage I remove the one separator on each side of the cage, and replace them the fifth day. If a super holding 35 tall sections is used on a medium swarm, I think one super is sufficient, especially if honey is not coming in very fast.

A HOME-MADE SWARM-HIVER.

As I live in the timber I had to devise something to get down the swarms which clustered high in the trees. For this purpose I found a crotch of wood large enough to spread wide open a large bran sack, which I secured to the outer ends of the crotch, with rings for the other side of the sack to slide up and down the arms of the crotch. When I wanted to catch a swarm I pulled the sack wide open with a string, held it under the cluster and shook the bees into it. I then let go of the string and the sack closed on them, when I let them down to the ground by the aid of a heavy twine.

If this should be of service to any one I shall feel repaid for writing these lines. Lincoln Co., S. Dak.

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Out-Apiaries—How a New Yorker Manages.

BY W. L. COGGSHALL.

My first out-yard was establisht in 1878. I have now three, ranging from three to 26 miles from home. I take entire charge of them myself from home, with the help of a man and my 13-year-old boy, except during the extracting season when I have more.

To accomplish this I get everything ready at home when there is no work to be done at the out-yards, then the first trip in the spring sees every yard supplied with their supplies for the season. These include fuel for smokers, and even the matches to light them with. The kegs for the honey are taken direct from the factory to each of the yards just before the season opens. Of course I sometimes make a mistake in estimating the amount of store-room required, but it is an easy matter to equalize them when occasion requires.

Each yard also has its regular lot of tools and furniture which stays there the year through. This includes the extractor, store-can, uncapping-dish and knife, strainer, and plenty of tin pails for water, etc. There is a supply of nails, screws, racks, wire-cloth, and of course the hammer and screw-driver, two bellows, one automatic smoker, long wisp brooms and a wheelbarrow make up part of the outdoor equipment. In fact, each yard has about everything that is likely to be needed there except the bee-veils, which always go with the man who does the work. The spring locks which are on the houses are all alike, so that one key fits them all.

I always try to get as protected a location as possible when locating a new yard. This is usually in the edge of a piece of woods where a space can be cleared off and leveled down sufficiently for the purpose. I always try to get them at least 20 rods from the road, so as to have no trouble with passing teams.

When I make the lease for the location I include the right of way to and from it, and the right to move off the building, which I put up, when I go away. This building is usually 12x16 feet, and 8 feet high at the eaves. This will accommodate from 80 to 100 colonies, which is as many as the location will support in this section of New York. The bees are all wintered out-of-doors, either in chaff-packt hives or in large packing-boxes holding eight colonies. Those in the chaff hives remain packt the year round, but those in the boxes are unpackt at the time of apple-bloom, and are used as single-walled hives during the summer, being packt again in October for the winter.—Canadian Bee Journal.

Tompkins Co., N. Y.

CONVENTION PROCEEDINGS

Report of the Northern Illinois Convention.

The annual meeting of the Northern Illinois Bee-Keepers' Association was held at Freeport Aug. 16 and 17. The local papers, by mistake, advertised the meeting for Wednesday and Thursday instead of Tuesday and Wednesday, as it should have been, consequently only those who take the American Bee Journal were in attendance.

In the absence of the President, the convention was called to order by Vice-President Herrick, at 1:30 p.m., Aug. 16. The attendance was rather light, but the time was fully occupied in the discussion of questions, among which were the following:

QUEEN-REARING—WINTERING—WAX-RENDERING.

"Shall we rear our own queens, or shall we buy them of the breeders?" The general opinion was that the best way was to select the best colony in the yard and rear our own queens.

"How do you winter your bees?" Mr. France, of Wisconsin, winters his in chaff hives on the summer stands. Nearly all in the vicinity, however, winter them in the cellars, some giving top ventilation and others only bottom ventilation. All agreed that the cellar must be well ventilated.

"What shall we render our wax in? and how?" The larger bee-keepers should render by steam or hot water. The smaller by the use of a sun extractor. Old combs, however, will yield a much larger amount of wax if rendered in water.

As nearly all present came from other points, and would stop over to the next day's session, it was voted to have an evening session.

Nearly all present at the afternoon session put in an early appearance, and an animated session was held, and the hour for closing came all too soon. Very much of the interest was occasioned by the presence of one of Wisconsin's most noted apiarists, Mr. N. E. France, who is State inspector of apiaries for his State, where they have a most excellent law in regard to foul brood among bees, and appropriate an abundance of money for putting the law into effect, in consequence of which the dread disease will soon be stampt out in that State. This question was discust to quite an extent in both afternoon and evening sessions, and consumed considerable time the second day.

No ladies graced the sessions on the first day, but Mrs. Stewart—the aged wife of one of Freeport's pioneer bee-keepers—sent in a beautiful boquet of gladiolas, which graced the President's desk, and was highly appreciated by all.

The second day's session began promptly at 9:30 a.m., with Vice-President Herrick in the chair. A large number of questions were in the box, and kept the meeting going at a lively pace, a few of which were as follows:

FOUL BROOD—JOINING THE UNION.

"Are the bee-keepers of Northern Illinois interested in the subject of foul brood? Do they want any laws on this subject, as a protection to their business?" This brought out a lively discussion, but was finally deferred till the afternoon session.

"What good can we expect by joining the Bee-Keepers' Union?" The objects of the United States Bee-Keepers' Union were ably set forth by Mr. France. Among others, the suppression of dishonest honey commission men, and the suppression of the sale and manufacture of adulterated honey. All agreed that it was a good thing, and all it needed was a large membership and a full treasury with which to prosecute the rascals. The laws of this State for the purpose are all-sufficient. As a result of the discussion eight gave in their names and dollars, which the Secretary was instructed to forward to General Manager Secor.

"Has this Association paid anything towards the Langstroth Monument Fund?" Mr. Herrick reminded the Association of the debt due the late Rev. L. L. Langstroth in the invention of a movable-frame hive from which he received no benefit, on account of a horde of unprincipled men who stole his patent to such an extent that he was unable to prosecute them. He died poor, and it is now proposed by the bee-keepers of this country to raise $200 to buy a suitable monument to place over his grave. The result was a collection of $3.50 toward the fund, which the Secretary was instructed to send Mr. George W. York, to be forwarded to the proper person. The following are the names of those contributing:

H. W. Lee, M. R. Bliss, Lewis Schmertman, N. A. Kluck, Wm. Glasser, George Frei, Geo. H. Weed, A. W. Hart, S. H. Herrick, B. Kennedy.

PREACHERS AND BEE KEEPING.

By request of one of the reverend gentlemen of Freeport, the following question was handed in:

"Would it be advisable for a preacher to keep bees for rest and recreation?" It was unanimously agreed that if he was interested in the study of insect life it would most assuredly be advisable, and would prove one of the most fascinating as well as interesting studies that he could take up.

The afternoon session was called to order at 1:30 p.m., when the following officers were elected:

President S. H. Herrick; Vice-President, Jonathan Stewart; Secretary, B. Kennedy, of New Milford; and Treasurer, O. G. Cummings.

It was decided to hold the next annual meeting at Rockford, and hereafter alternate between Rockford and Freeport. It was also decided to have two meetings on the third Tuesday in May, each year, one in the vicinity of Rockford, and the other near Freeport, the latter to be in charge of Vice-President Stewart.

AN ADDRESS ON FOUL BROOD.

Mr. N. E. France then gave an interesting address on the subject of foul brood among bees, which was listened to with close attention. He exhibited specimens of comb filled with foul brood, and explained how it was carried from one apiary to another. He also told how nearly it was stampt out in Wisconsin by the excellent law provided for its suppression. He said that there is foul brood in quite a number of localities in this State.

A resolution was unanimously adopted in favor of a law in Illinois, similar to the Wisconsin law, and urging the Illinois State Bee-Keepers' Association to do all in its power to secure the passage of such a law by our next legislature.

While the attendance was somewhat limited, there was a lively interest maintained all through, and the convention adjourned only when it became necessary for members to reach their trains for home. This was rather surprising, since this is a very poor year for honey.

The number of colonies represented was: Spring count, 865; fall count, 1,104; amount of honey, 26,452 pounds. Of this amount 21,000 pounds belongs to Mr. France, and also 500 colonies, fall count.

Mr. France sang a number of bee-songs which enlivened the meeting. He also helpt very materially all through, for which a vote of thanks was extended him.

S. H. Herrick, *Pres.*

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Feeding for Winter Stores.

I have 48 colonies of bees, and they have not done any good this summer. It was too cold and wet in the spring, so they did not breed up until late in the season. I put supers on and took them off empty. They have not enough honey to winter. There is not one solid frame in the whole lot. Some have sealed honey along the top-bars and in the corners, and some have no sealed honey at all. Honey is coming in from wild flowers just fast enough to keep them breeding. We do not get any flow here after basswood. They are rearing another crop of drones. The hives are full of bees and brood—not much room for honey.

Now I want to know how to get the bees over winter as cheap as I can. I have only 16 feeders—one feeder for three hives. My feeder is a thin board with a hole in it, and a small box on top a wire-cloth lid. In it I place two Simplicity feeders.

When shall I commence feeding? If I commence now, will they not keep on breeding so there will be no room for stores, and waste the sugar? Will one barrel do, or must I get two? Can I feed twice a day—morning and evening? When must I commence? Ohio.

Answer.—If you're sure your chance of a harvest is all over for the season, you may as well commence feeding at once and crowd the work through as fast as possible. You can feed so as to have the feed used up to a greater or less extent by feeding regularly and slowly, but if you give them a big lot at a time it will be stored in the combs. If I understand you correctly, you put two Simplicity feeders on a hive, each feeder holding about a pound of feed. That makes slow work, the best you can do. It's doubtful if two barrels of sugar will be enough, considering the description you give of the condition of the brood-chambers. Better get at least a few feeders large enough to take at once all you want to give to a colony. You can put a Miller feeder on a hive, put in 10 or 15 pounds of sugar, fill up with water, and the job is done. In a day or two they will take it all down, and if you don't get in quite enough water first time you can fill in more next day. Then you can move the feeder to another hive. If you don't care to be at any expense for feeders, you can use the crock-and-plate plan so often described in these columns. Put sugar in a stone crock, then as many pints of water as sugar, put a piece of woolen cloth or flannel over the crock (two pieces if thin), or five or six thicknesses of cheese-cloth, put a plate over this, with one hand under and one hand over, shake around pretty well, and then suddenly turn the whole thing upside down. Set this over your frames with an empty hive-body over it, well covered up so no robbers can get in. When you commence feeding a colony, crowd it right through, then tackle another colony. Get all fed as early as you can.

What to Do with Brood-Frames.

What am I to do with the brood-frames that are about half full of honey and the remainder full of young bees?

Pennsylvania.

Answer.—I've studied over your question and can't think of a thing you ought to do only to let such frames alone. If the brood-frames are half full of honey and the balance contains brood, you can hardly desire anything better. If there's anything I don't have straight in my understanding of your question, let me know and I'll be glad to try again.

Eight-Frame Hives—Supers in Winter.

1. Why do you recommend 8-frame hives to beginners when they are inadequate? I find one of my hives overflowing with bees. They hung out, so I put on the second super with sections, which helpt things considerably.

2. What will they do when I take the supers off to pack them in chaff for the winter?

3. Could I leave on one of the supers with partly-filled sections without any material damage to the bees, then transfer them to a larger hive in the spring? New York.

Answers.—1. I have more than once said that an 8-frame hive was not as good as a larger one for any one who does not pay considerable attention to his bees. But there is no reason why the largest number of bees possible as the progeny of one queen may not find plenty of room by the use of 8-frame hives. If one story will not accommodate them, additional room can be given either by giving a second story of eight frames, or else by giving sufficient super room. You say your bees hung out with only one super on. I should be very sorry to have many colonies so weak that they could be contained in an 8-frame hive and a single super during the honey harvest. Last year (there has been no harvest this year) I had many colonies that filled an 8-frame hive and as many as five supers at the same time. Some had more than that.

2. Those colonies of mine that filled the hive and five or more supers had no trouble in being confined to an 8-frame hive when fall came. Just wait, and you'll find your hive is large enough for fall and winter.

3. Yes, that will be a good thing for the bees, but it will

be rough on the sections. But you can take off the the sections and I think you'll find there will be no difficulty about there being room enough in the hives. If proper attention is given to the bees, so that they will not be allowed to get short of stores, an 8-frame hive serves a very good purpose. I'm inclined to think I shall use that size of hive in the future as I have for a number of years past. If the eight frames do not give the bees room enough, I can give them another story at any other than harvest time, and at harvest time I can give enough supers to hold all the bees. But for any one who leaves his bees to themselves, merely hiving them when they swarm, and taking away the surplus in the fall, a larger hive is decidedly safer and better.

Rearing Queens and Drones—Purely-Mated Queens.

1. I examined my bees to-day (Aug. 16) and found queen-cells with eggs in them. Why are there eggs in queen-cells at this season of the year? The hives are full of brood, but there is little honey coming in. The prospect for a fall flow is good.

2. Why are my bees rearing so many drones? There is more drone-brood in the hive now than in the spring.

3. Can I rear purely-mated queens where there are no black bees within two miles of me? VIRGINIA.

ANSWERS.—1. It is possible the bees contemplate swarming. A colony strong in bees is as likely to swarm in a partial honey-flow as when the flow is unusually strong. More likely, however, the eggs in queen-cells mean the supersedure of the queen. Remember that about one-third of your queens must be superseded annually, and this supersedure generally takes place after the time of swarming.

2. The same reason that would make them have eggs in queen-cells would account for the drones, as there would be no use in rearing queens if there were no drones.

3. Taking that question as an every-day, common-sense question, I should say no. For it's pretty nearly certain that black drones are not very far away. If there are no black bees anywhere within two or three miles—nothing but pure Italians—then you may be pretty safe in expecting your queens to be purely mated.

A Too-Prolific Queen.

I have a queen that is too prolific for my management. If I reduce the brood-chamber she swarms out, and if given room she will keep all the colony busy rearing brood. What can I do to secure surplus? I got no surplus from her colony this year, and a colony by its side gave me 40 pounds of comb honey in 1-pound sections. I workt her on the Heddon plan. OREGON.

ANSWER.—It's difficult to say what may be best. The first question is whether the bees are such poor gatherers that they yield no surplus, no matter how strong. If that is the case the evident remedy is to change their queen for a better one. If the character of the bees is all right, and the only trouble is that they are strong and swarm, put the swarm on the old stand, and give them the supers they had on, and you ought to get a good report in surplus. You say if given room the queen keeps all the colony rearing brood. If that is early enough, so that the colony comes to about its fullest development about the beginning of the honey-flow, unless there is something radically wrong in the character of the bees you ought to have fair results. If she has all the room needed for brood, and the additional room is in the super, such a strong force of bees ought to be able to do something unless swarming takes place, in which case the result ought to be as previously mentioned. It is possible that it might have helpt somewhat toward a decision if you had told more particularly what you mean by reducing the brood-chamber, how many frames you use for the colony, and the size of frames.

Preserving Extracting-Combs.

On page 468, John Newton writes that "after the extracting season is over he places the combs three high with a quilt between the brood-chamber and supers, with a corner turned back to allow the bees to clean them up."

1. Which do you think is the better way to place them—as above stated, or to put them under a colony?

Again, he says: "After combs are clean they are again placed in the store-room, with a sheet of paper between each, until they are wanted again the following spring." He does not say if they are hung up or piled close together with paper between, nor what kind of paper.

2. Could I not put the cleaned combs in a box made of wire-screen to keep out moths?

3. Please give what you think is the best way to preserve extracting-combs from now until next spring. MINNESOTA.

ANSWERS.—1. Probably there isn't a great deal of difference. Until lately I have put extra combs (much the same as extracting-combs) under the brood-chamber, but on some accounts it is better to put them above. In either case, if the brood-chamber is crammed full of honey, except what is occupied with brood, the bees will be slow to empty out the extracting-combs. They will clean them up nicely, but the honey got in the cleaning up will be put in the extracting-combs. But late enough in the season there will usually be enough room in the brood-chamber for all purposes. One objection to putting combs under, in case they are to be cleaned up to be put away, is that if they are put there early enough and the bees still do some gathering, they are likely to put pollen in them instead of in the brood-chamber. Another reason for putting them over instead of under, is that it is easier to put them there, and also easier to take them away.

2. That will work very well, providing you are sure the combs are entirely clear of eggs and worms when stored, or providing they are brimstoned, if needed.

3. On the whole, it is perhaps as easy and safe a plan as any to let the bees take care of the combs till too late for the moths to do any harm. If they are taken from the bees toward the end of November in Northern States, there will be no further trouble about worms till next spring, and none then if the combs are well frozen in the winter. If fastened in the hives away from the bees—I mean fastened so no mice can get in through the winter—they can be left out-doors with safety.

The Queen in Making Increase—Extracting Frames.

1. In forming a new colony by taking a frame of brood with adhering bees and queen from hive No. 1, and placing it in empty hive No. 2, and placing No. 2 on the stand of a strong colony, No. 3, just moved to a new location, would it be best to cage the queen until the field-bees of No. 3 became acquainted with her, she being a valuable queen?

2. I use Hoffman frames in the brood-chamber. Would you use them in extracting-supers, or shallow ones, half depth?

3. If shallow frames, would thin surplus foundation do?

4. If full size, would you advise them to be wired? GEORGIA.

ANSWERS.—1. If honey is coming in well it is hardly necessary, still it might be well as an extra precaution with a valuable queen. I once removed a strong colony from its stand, set in its place a hive filled with empty combs, putting in a queen without a single worker attendant, and it was an entire success. At another time the queen was killed.

2. That's a hard question to answer. The regular brood-frames have the advantage that they may be used either place interchangeably. The shallow frames have the advantage that they are a little better for extracting purposes on account of size, being easier to uncap, and the honey being more uniformly ripened, for it often happens that the upper part of a large frame will be sealed some time before the lower part. It is also urged that a comb that has been used for brood should not be used for extracting purposes, as a slight darkening of the honey will occur from using dark combs. If you have shallow extracting-frames, there is not much danger they will be used for any other purpose. On the whole, it might be a good plan to use full-sized frames for extracting until you have all the frames of that kind you want as brood-combs, then confine yourself to shallow combs for extracting. The fact that such able men as the Dadants use shallow frames for extracting is a strong argument in their favor. For one thing, they say a queen is less likely to lay in the shallow combs.

3. It might. Certainly thinner foundation will do in shallow than in deep frames, and it would not be quite so bad to have foundation stretch in extracting as in brood-combs.

4. Yes.

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

EXECUTIVE COMMITTEE—Pres., George W. York; Vice-Pres., W. Z. Hutchinson; Secretary, Dr. A. B. Mason, Station B, Toledo, Ohio.

BOARD OF DIRECTORS—E. R. Root; E. Whitcomb; E. T. Abbott; C. P. Dadant; W. Z. Hutchinson; Dr. C. C. Miller.

GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

Place and Date of Next Meeting:

Omaha, Nebr., Sept. 13, 14 and 15, at the Delone Hotel, Cor. 14th Street and Capitol Avenue.

VOL. 38. SEPTEMBER 8, 1898. NO. 36.

EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Omaha—the place. The time—next Tuesday, Wednesday and Thursday. The occasion—the 29th annual convention of the United States Bee-Keepers' Union.

◆

From Chicago to Omaha we expect to have a very pleasant time. Mr. A. I. Root wrote us Aug. 30 that he and Ernest R. Root expect to be with us next Monday evening to start over the C. B. & Q. road at 5:50 o'clock. Mr. Root said he would make the announcement in Gleanings for Sept. 1, and that they wanted "Dr. Miller to be in the crowd, sure." Of course the Doctor will be along, and we hope that many more will join us.

Remember that we will reserve sleeping car accommodations in the same car with us if we receive instructions in time. We ought to know by Saturday of this week, if any more wish us to reserve berths for them.

◆

Honey-Dew for Winter Stores.—The Bee-Keepers' Review gives the following as its opinion on the use of honey-dew for winter stores for bees:

"Quite a number have written me that their bees have gathered honey-dew this year. In some localities the bees have filled their hives with it..........there is a difference in honey-dew; some is almost black, and sickening in flavor, while some is light in color and rather pleasant in taste. I remember that Prof. Cook used to tell us of these two kinds of honey-dew, and explain that one came from one source and the other from some other source, but I have forgotten now what was the exact difference in the sources. He used also to tell us that he considered the light-colored wholesome, and that with the right conditions it might be safe for winter-food for the bees; but he most emphatically condemned the dark, ill-flavored variety. It is quite likely that in Southern localities, where it is not so cold, and where bees may enjoy an occasional flight during the winter, honey-dew may be all right for winter-stores, but there have been too many heavy losses from this source, where the winter is long and cold, to trust it for winter-stores."

◆

The Omaha Convention will be held next week—Tuesday, Wednesday and Thursday, Sept. 13, 14 and 15, at the Delone Hotel, Cor. 14th St. and Capitol Ave.

Are *you* going to be there? Better go if you can. It should be the best and largest convention of bee-keepers ever held in this country. It can be, if every bee-keeper will make a big effort to attend.

Some may say it costs too much to go. In one hundred years from now you won't miss the amount you spent in attending conventions. And you will never realize how much you miss if you stay away.

Of course you will be at Omaha next week, *if at all possible*.

◆

The Chicago Bee Keepers' Association is the newest organization among bee-keepers. It was started here Sept. 1, at the Briggs House. The intention is to build up a strong society among the bee-keepers residing in Cook county, which practically is Chicago. There are over 100 of them in this county. A constitution was adopted, fixing the annual dues at 50 cents, the meetings to be held quarterly, the first Thursday of December, March, June and September. The officers elected are—President, C. Beers; Vice-President, Mrs. Fannie Horstmann; and Secretary and Treasurer, H. F. Moore.

Of course, all bee-keepers in Chicago and Cook county will wish to become members of this association. If it is more convenient to send your dues to the Bee Journal office, do so, and we will hand it to Mr. Moore, who will mail you a receipt.

◆

Using Narrow-Width Sections.—In a recent issue of the Bee-Keepers' Review, Editor Hutchinson gave this paragraph on the width of sections:

"The width of sections that I used this year is only 1½ inches. Several years ago, when I lived at Rogersville, I used several thousands of sections of this width. This is the width that bees naturally build their comb, and they build this width of combs more even and straight without separators than they do the thicker combs. They complete and cap the combs quicker. Fourteen sections weigh about 12 pounds. I like sections of this width."

Editor Root, after copying the foregoing, has this to say on the subject:

"If I can read the signs of the times the trade will gradually work toward lighter-weight section honey-boxes—not for the purpose of deception, but because the wholesale price of honey has got down so low that one or two things must happen: The price must go up or quantity decrease. In good years the former is out of the question."

While no doubt many grocers who retail comb honey by the section, and not by weight, would prefer the lighter-weight sections, still the consumers, we think, would prefer to have the heavier section, and pay a little more for it. It will be a hard matter to get the bees to put 14 ounces of honey in the 1½-inch sections oftener than—well, it will not be their rule, we think.

◆

Honey Cherry-Phosphate.—A "straw" in Gleanings says that a Mrs. Collins recommends, for a hot weather drink, cherry phosphate sweetened with honey. It can always be on hand, even when lemons cannot, and a set of threshers gave coffee the go-by for this drink.

Burlington Route

Yes, the "B(ee)-Route" is the Chicago, Burlington & Quincy for Omaha next week, when attending the annual convention of the United States Bee-Keepers' Union. Be sure to see that your ticket takes you over the great "Burlington Route." If you are east of Chicago, and can do so, ride on the "Nickel Plate" road, then from here on take the "C. B. & Q." right to Omaha.

The editor of the American Bee Journal, with others, expects to leave Chicago via the "Burlington Route" next Monday, Sept. 12, at 5:50 p.m., arriving in Omaha at 8:10 o'clock the next morning in ample time to be at the opening session of the convention at 10 o'clock.

We learn that bee-keepers from all over this great country are expecting to be at Omaha next week. It will be a fine opportunity to meet many that you have read about in the bee-papers, and whose writings you have enjoyed. And then, the program—gotten up according to Dr. Mason's very best prescription—that will be a treat long to be remembered.

Last year it was, "Put me off at Buffalo." This year the "Burlington" conductor will "Put me off at *Omaha!*"

The Omaha Convention Program.—On the program built by the Secretary, Dr. A. B. Mason, for the Omaha convention next week, appear the following subjects and essayists:

General Advice to Bee-Keepers—Rev. Emerson T. Abbott, St. Joseph, Mo.
Bee-Keeping in Cuba and Porto Rico—O. O. Poppleton, Stuart, Fla.
Co-operation Among Bee-Keepers—P. H. Elwood, Starkville, N. Y.
Organization Among Bee-Keepers—W. F. Marks, Chapinville, N. Y.
Bees in America—Prof. Lawrence Bruner, Lincoln, Nebr.
Recent Progress in Apiculture—E. R. Root, Medina, Ohio.
Feeding Bees for Best Results—W. Z. Hutchinson, Flint, Mich.
President's Address—George W. York, Chicago, Ill.
Bee-Keepers and Supply Manufacturers—Dr. C. C. Miller, Marengo, Ill.
Foul Brood in the Apiary—Wm. McEvoy, Woodburn, Ont.
Advanced Methods of Comb Honey Production—S. T. Pettit, Belmont, Ont.
Experiences and Suggestions in Marketing Honey—S. A. Niver, Groton, N. Y.
Best Method for Creating and Maintaining a Market for Honey—Herman F. Moore, Chicago, Ill.
Migratory Bee-Keeping—H. E. Hill, Titusville, Pa.
Honey-Producing Plants—Prof. Charles E. Bessey, Lincoln, Nebr.
The Scientific Side of Apiculture—C. P. Dadant, Hamilton, Ill.
A Half Century of Bee-Keeping in America—Hon. Eugene Secor, Forest City, Iowa.
Best Size of Hives to Use in the Apiary—J. F. McIntyre, Sespe, Calif.
Report of Secretary—Dr. A. B. Mason, Sta. B., Toledo, Ohio.
Report of General Manager—Hon. Eugene Secor, Forest City, Iowa.
The Relation Existing Between the Apiary and the Successful Production of Fruit—G. M. Whitford, Arlington, Nebr.
The Apiary on the Farm and in the Orchard—E. Whitcomb, Friend, Nebr.
Needs of Bee-Culture in the South—Dr. J. P. H. Brown, Augusta, Ga.

Besides a list of the various features of the convention, the program contains a number of bee-keepers' songs, the pictures of the nine officers, etc. Send 5 cents to the Secretary, Dr. A. B. Mason, Sta. B, Toledo, Ohio, and get a copy of it. The music is worth fifty times the price askt for the program.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all other bee-keepers possible to subscribe for it.

Honey Crop Poorest in Years.—Editor Root, in Gleanings for Aug. 15, says this when referring to the honey crop of the United States for 1898:

> Later reports seem to confirm previous reports to the effect that the season this year comes as near being a failure, so far as honey is concerned, as any year bee-keepers have had for many a year back. A few have been fortunate enough to secure good crops, and market quotations, owing to scarcity, indicate an advance in both comb and extracted. The season seems to have been the poorest in our own State of Ohio. In sections of West Virginia, Pennsylvania, Indiana, Michigan, Wisconsin and Minnesota, good crops are reported; the season in Vermont seems to have been exceptionally good; and reports indicate fair honey-flows in other portions of New England. Of course, the season in central and southern California was a complete failure, owing to a lack of rain. In northern California some honey was gathered. Colorado is the one State out of all the rest that will be the banner honey State this year, for the season was considerably ahead of last year. Very flattering reports have come from Florida.

To Organize a Bee-Association.—Rev. L. Allen, of Clark Co., Wis., sends us the following, looking toward the starting of a local bee-keepers' association:

> EDITOR YORK:—Please give notice through the "Old Reliable" that the bee-keepers, and all others that may be interested in apiculture, are requested to meet in Greenwood, Clark Co., Wis., Saturday, Sept. 10, 1898, for the purpose of organizing a bee-keepers' association. The invitation is extended to the ladies as well as gentlemen, the young as well as the old. Come one, come all. Come expecting to bear some humble part in the gathering and its doings.
>
> We don't know just exactly the nature the meeting will assume—probably will open by way of relating experiences. I am inclined to the opinion we will have a good time and profitable. By order of committee.
>
> L. ALLEN

We trust that all who can arrange to be present next Saturday will not fail to attend and aid in getting the association organized.

Beet vs. Cane Sugar.—Now and then the question comes up as to whether beet sugar is as good for wintering as cane sugar. Across the water opinion seems to be nearly unanimous that it is not. On this side bee-keepers in general do not concern themselves about it. R. L. Taylor says in Review, "The highest chemical authority at the Michigan State Agricultural College says they are identical—beet sugar *is* cane sugar." Editor Root says that equally diamond and charcoal are chemically the same, but for all that there is a vast difference in them. He says that years ago their bees didn't winter as well on cane sugar as now when they are supposed to have nothing but beet sugar, but the sugar may have had nothing to do with the difference, and he has much respect for the opinion of such a man as T. W. Cowan, who recommends cane in preference to beet.

Why Eat Honey?—the leaflet heretofore used to some extent—is now out of print, and we do not now expect to have any more of them. The 24-page pamphlet, "Honey as Food," is so much superior, and more effective and helpful in creating a demand for honey. See prices on another page, also in the book columns.

Cream-Colored vs. Snow-White Sections.—Referring to this subject in Gleanings for Aug. 15, Editor Root says:

> The editor of the Bee-Keepers' Review quite agrees with Mr. G. K. Hubbard, that it is only the bee-keepers who demand snow-white sections; that neither the merchant nor consumer asks for them. And in turn I quite agree with Mr. Hutchinson, that it is poor business management to pay for extra whiteness. In our catalog for the last two years we have tried to educate our fraternity up to this sort of doctrine, but somehow bee-keepers will insist on white goods, in spite of the fact that white honey would show off to better advantage

in the darker or cream-colored box. Put a cake of nice white honey, for instance, down on some clean snow and it will appear dark by contrast. Of course, snow is whiter than the whitest basswood; but there is a great deal of this wood that is much whiter than the average of white honey, and I cannot and never could see the sense of paying more money for the so-called snow-white when it is quite liable to make the honey it incloses appear darker by contrast.

The supply dealer is perfectly willing to give his customers their choice, and if they are determined to pay more money for the white sections, he has no fault to find.

All the same, *we* prefer the white sections. Not necessarily "snow-white," but fairly white. And at the price of sections, were we using a great quantity of them, we would prefer to pay a little more and get the whiter sections. For marketing purposes, we certainly like to have the white sections, and of course want the white comb honey in it. Here in the city appearance goes a long way when it comes to comb honey. Only the very whitest—both of comb and section—will bring the highest price. And, after all, isn't it advisable to aim always at producing the very best honey in appearance as well as in flavor? Do the very best you can, there will still be plenty of the lower grades produced.

◆

Folding Paper-Trays for Shipping-Cases.—Editor Hutchinson gives this method in the August Bee-Keepers' Review, being the same as was described in that paper a year ago:

> "If any one experiences any trouble in folding up the paper-tray that goes in the bottom, let him make a board about one-eighth of an inch, or a trifle more, smaller than the inside of the case. Place the sheet of paper on top of the case, lay on the board, and then gently press down upon the board, forcing the paper to the bottom of the case. A nail driven in the upper end of the board will furnish a handle for removing the board. The lower corners of the board may need rounding off to prevent their puncturing the paper. It may require a little patience and practice to get the board just right, and to learn how to use it, but the neatness and dispatch that follow will amply repay the trouble."

◆

A Flowing Honey-Stream.—This occurred in the Episcopal church in Tulare county, Calif., it is said. A swarm of vagrant bees, while in search of a suitable home, found an admirable location in the loft of that church, where, having an abundance of space, they increast and multiplied, and at the same time laid up a large store of honey.

Great white combs were attacht to the rafters overhead, and added to until hundreds of pounds of honey were hidden away in the waxen cells. One hot day the wax gave way, and down rafters, scantlings and joist began to flow streams of liquid sweetness. Through every crevice it poured, and soon altar, pulpit, chancel and pews of the sacred edifice were treated to such a flood of honey as had never been witnest before.

THE WEEKLY BUDGET

MR. EVAN J. DAVIS, of Lyon Co., Minn., wrote us Aug. 31:

> "I have 15 colonies of bees, but not much honey. Long live the American Bee Journal."

C. J. H. GRAVENHORST, the much esteemed editor of Deutsche Illustrierte Bienenzeitung, has been very sick since the beginning of the year, and is still confined to his bed. Altho past his threescore years and ten, he is a man of remarkable vigor, and it is to be hoped that he may be yet spared long years for the benefit of bee-culture in Germany and throughout the world. [Friend Gravenhorst, despite his age, seems to be one of the most progressive bee-keepers in Germany. All that he has written on the subject of bees, so far as I know, seems to sparkle from the fountain of eternal youth.—ED.]—Gleanings.

MISS MATHILDA CANDLER, of Grant Co., Wis., writing us Sept. 1, said:

> "My bees have done fairly well so far, on basswood, and are now busily working on fall flowers."

MY NEIGHBOR KOEPPEN, who has six apiaries, will have at least 20,000 pounds of white comb honey. From some of his apiaries he may get some fall honey. He had a young man help him about three months this season.—Editorial paragraph in Bee-Keepers' Review.

MR. W. J. PICKARD, of Richland Co., Wis., called on us last week, and reported their crop as being 50,000 pounds of extracted basswood honey this year, from about 400 colonies in four apiaries. It was a great season at his place, and the honey is fine. Mr. Pickard's wife and daughter seem to manage the bees. And judging from the yield they know how.

YE EDITOR AND WIFE spent a very pleasant week in northeastern Ohio—from Aug. 19th to the 27th—visiting among the former's parents, brothers, sisters, and old friends. It is over 14 years since we left our boyhood home for Chicago, and during that time many are the changes that have taken place. Some of the then older friends have past on to the "other shore," and others begin to show the wear of years. Yes, we are all fast hastening to that long home whence none return.

MR. C. A. HATCH is now in Colorado, engineering an apiary, and hobnobbing with R. C. Aikin and others. Mr. Hatch should not have been discouraged at the failure of the honey crop in Southern California, for there are many places where the bees will roll in quite a honey crop, even in California. Here am I, where the alfalfa is yielding honey quite rapidly, and the conditions are so nice the ranchers believe it makes better hay to stand awhile in bloom, and that is just pleasing to the bee men.—J. H. MARTIN, in Gleanings.

MR. HARRY E. HILL—the new editor of the American Bee-Keeper—is going to give us all warm competition. His experience in keeping bees is probably more varied than that of any other apicultural editor in the United States. He has seen and kept bees from New York to California, from California to Florida, and from Florida to Cuba. He, if any one, ought to know the influence of locality and its effect upon bees. The American Bee-Keeper, under his editorial management, fairly bristles with good things.—Gleanings.

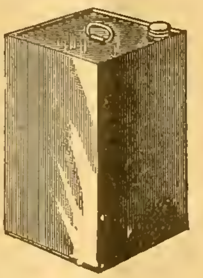
MRS. E. A. STARR, editress of the Philadelphia Public Ledger's apiarian department, has kept a colony of bees on the window-ledge outside of her room, on the fourth floor of the Ledger office, for the past four years. A covering of newspapers over the frames is the only protection given the colony during the winter seasons. "The bees" says M. F. Reeve, "come and go at their pleasure, and gather a great deal of sweetness from Independence and Washington Squares —the former directly across the street, and the latter about a block away." The Quaker City has another lady bee-keeper who keeps 18 colonies in a third-story window up town. These are located inside, and the laden workers have for an alighting-board the window-sill, while an opening is left at the top for the exit of the out-bound force.—American Bee-Keeper.

Honey as Food is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey among should-be consumers. The forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 30 cents; 50 for 50 cents; 100 for 90 cents; 250 for $2.00; 500 for $3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

BEST

EXTRACTED HONEY FOR SALE

ALL IN 60-POUND TIN CANS.



ALFALFA HONEY

This is the famous white extracted honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

BASSWOOD HONEY

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is greatly preferred by those who like a distinct flavor in their honey.

PRICES OF EITHER ALFALFA OR BASSWOOD HONEY:

A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—One 60-pound can, 7½ cents a pound; 2 cans, 7¼ cents per pound; 4 or more cans, 7 cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. This honey is all

Absolutely Pure Bees' Honey.....

the finest of their kinds produced in this country.

☛ We would suggest that those bee-keepers who did not produce any honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. The pamphlet, "HONEY AS FOOD," will be a great help in creating customers for honey. See prices on another page.

GEORGE W. YORK & CO., - 118 Michigan St., CHICAGO, ILL.

Be It Known

To all Men, we are prepared to fill orders promptly for

CHOICE QUEENS of the best strains of Golden or Leather-Colored Italians....

Tested $1 00: Untested—one, 75c; three, $1.50. After July 1, 50c each. Remit by Express Money Order, payable at Barnum, Wis. One and two-cent stamps taken. Address,

Van Allen & Williams,
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Please mention Bee Journal when writing.

Bee-Hives, Sections, Shipping-Cases—everything used by bee-keepers. Orders filled promptly. Send for catalog MINNESOTA BEE-KEEPERS' SUPPLY MFG. CO., Nicollet Island, Minneapolis, Minn.

ONE MAN WITH THE UNION COMBINATION SAW

Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery Sold on Trial. Catalogue Free.

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AUGUSTA, WIS.

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GENERAL ITEMS

Bees Are Doing Well.

Blackhart and buckwheat have come into bloom again, and they are yielding honey in abundance. Bees have been swarming some in this locality. I can extract about 1,000 pounds a week. We did not get any clover honey. I think it was too wet in the spring and too dry in the summer, but clover never bloomed better than it did the past summer. I have extracted about 2,100 pounds already, and am going to extract to-morrow. I use the 7 two-frame Novice honey-extractor, and with some help can extract 1,000 pounds in a day. I do not do much with my bees in the summer, as I have so much other work to do, but I always have them watcht in swarming-time. The one who hived the swarms helps me extract the honey. She wrote a little for the Bee Journal some time ago, and is much interested in bees. J. F. WIRTH.

Henry Co., Ill., Aug. 30.

Poorest Year of All.

This is the poorest year I have had yet. Bees were never as strong in numbers before, and plenty of blossoms, but little honey. I hope they will have some soon. There is a good show now, but it was so wet in the spring, and then so dry, but lots of rain lately. I have had but few swarms, only 7 out of 20 very strong colonies. Last year I had only 5 swarms from 20 colonies. I have taken

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The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated $2.00 per annum. Sample Copy Free.

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QUEENS.

Now is the time to re-queen, and the place to get them is from DANIEL WURTH. He furnishes good Queens by **return mail** for 45 cents each; 6 for $2 70; or $5 00 per dozen.

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36A4t Falmouth, Rush Co., Ind.

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SEND Your Address... on postal card for a free copy of my book on Queen-Rearing.

HENRY ALLEY, Wenham, Mass.

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Nickel Plate Excursion to Boston.

Tickets on sale for trains leaving Chicago Sept. 16 to 18, inclusive, at rate of $19.00 for the round-trip, and good returning until Sept. 30. Also cheap rates to all points East. Vestibuled sleeping-cars to Boston, and solid train to New York. Rates lower than via other lines. For further information call on or address, J. Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone Main 3389. 60-32-6)

Sweet ❦ Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order·

	5℔	10℔	25℔	50℔
Sweet Clover	.60	$1.00	$2.25	$4.00
Alsike Clover........	.70	1.25	3.00	5.75
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Crimson Clover........	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage. wanted by freight.

Your orders are solicited.

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118 Michigan Street, - CHICAGO, ILL.

Queens, Bees and Bee-Keepers' Supplies

Tested Queens in April and May, $1.00. Untested, 75c. Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

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8Atf GRANGER, MINN.

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Watch Pouder's ad

SEE THAT WINK!

Bee-Supplies! ROOT'S GOODS at Root's Prices.

Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Cat-free. Walter S. Pouder,
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THE PLACE
TO GET YOUR
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Is of H. G. QUIRIN, of Bellevue, Ohio.

Ten years' experience with the best of methods and breeders enables him to furnish the best of Queens—Golden Italian—Doolittle's strain—warranted purely mated, 50c; 6 for $2.75. Leather Colored same price. Safe arrival. No postage stamps wanted. 23A16t

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Muth's HONEY-EXTRACTOR
Square Glass Jars.

Root's Goods at Root's Prices.

BEE-KEEPERS' SUPPLIES in general, etc etc, Send for our new catalog.

Practical Hints" will be mailed for 10c in stamps. Apply to—

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Meeting of Sovereign Grand Lodge, I.O.O.F., Boston, Mass., Sept. 19 to 24, Inclusive.

For this occasion the Nickel Plate Road will sell tickets at rate of one fare for the round-trip. Tickets on sale Sept. 16 to 18, inclusive, good returning until Sept. 30, inclusive. For particulars, address J. Y. Calahan, General Agent, 111 Adams Street, Chicago, Ill. Telephone Main 3389. (59-32-6)

off only about 60 sections of honey as yet, but they are all filling up now with all kinds of mixt colors. I never keep over 20 colonies. My bees are all fine Italians, and extra-strong colonies.

I am 75 years old, and 53 years ago we were married. I can see as well as I could when a boy. I can take dog and gun and walk from daylight till dark and be not much the worse for wear. We have reared 15 children, and my wife is quite young-looking yet, and nimble—71 years old. I have been used to bees ever since a boy, off and on. I was born in Sussex, England; lived in Canada 27 years, and I have been here 17 years. HENRY WHITE.

Humboldt Co., Iowa, Aug. 26.

Short Honey Crop.

Our honey crop will be short this year, with 10 swarms to our credit—the first May 24, and the last Aug. 24. Not very encouraging for an apiary of 50 colonies. PAUL WHITEBREAD.

Luzerne Co., Pa., Aug. 29.

Prospects Not Good.

The prospects for a honey crop here are not good. It was too wet in forepart of the season, and when locust came into bloom it was so hot that the bees did not gather much honey. It is too wet to expect much from the buckwheat crop also.

Clinton Co., Pa. JOHN SUTER.

Bees Not Doing Well.

Bees are not doing well here this season, altho mine have for some reason done well. From nine colonies in the spring, up to date I have taken off 300 pounds of comb honey, while other bee-keepers have no honey at all. I had an increase of only three colonies this season. C. M. CHASE.

Wood Co., Wis., Aug. 23.

A Report for 1897.

Last year I began in the spring with 12 colonies, and had 8 swarms. The strongest one took nature's flitting on me when gone to see a patient. I made one colony from a nucleus, thus ending the season with 20 colonies. My bees stored 3,160 pounds of honey in 1897. I believe this to be the greatest bee-record ever made in the United States.

ALBERT SAYLER, M. D.

Clermont Co., Ohio, Aug. 27.

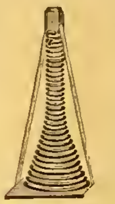
Disappointing Season.

The season here has been very disappointing. There was an abundance of clover and other bloom, but the bees did not work on it. The honey crop is very short—I have only about one-third of a crop. Bees are in good condition for a fall crop: the prospect is good, and I hope to get some honey this fall. The late rains have brought out the aster and golden-rod.

I have had very bad luck this season. On the night of Aug. 4 we had a terrible flood which destroyed everything in its course. The water came down in the hollow which I live like a river; it came within one inch of the floor of my dwelling-house. It was 10 inches deep in my apiary, and drowned many bees. I am preparing to move my house, as I cannot live and be contented in the place I am. There are a good many bee-keepers around here, but very few

DR. PEIRO,
CENTRAL MUSIC HALL, CHICAGO.

Please mention Bee Journal when writing.



Queen-Clipping Device Free

The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

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OUR PRICES are worth looking at. We are making the new

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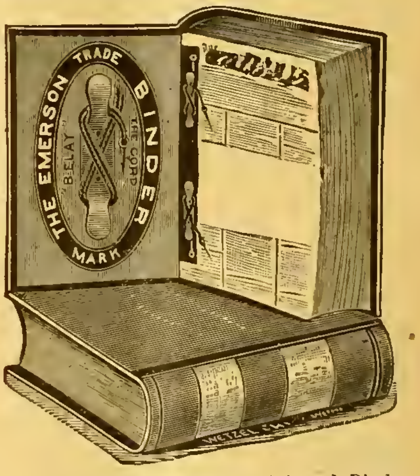

This Emerson stiff-cloth-board Binder for the American Bee Journal we mail for 60 cents; or will send it with the Journal for one year — both for $1.50. It is a very fine thing to preserve the copies of the Bee Journal as fast as they are received. If you have the "Emerson," no further binding is necessary.

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If you want Colorado Alfalfa, Sweet Clover and Cleome honey—comb or extracted—correspond with the Secretary of the Colorado State Bee-Keepers' Association. Our Honey ranks high in quality. Car lots a specialty. Address **F. RAUCHFUSS, Elyria, Colo.**

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Has No Fishbone in the Surplus Honey

Being the cleanest is usually worked the quickest of any Foundation made

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For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 25 cents per pound, CASH. No commission. Now if you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

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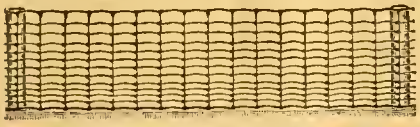

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Two-frame Nucleus, with Queen, $2.25.
If you want **BEES FOR BUSINESS,**
send for my Catalog of prices. . . . .
18Etf J. F. MICHAEL, Greenville, Ohio.
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VAN ALLEN & WILLIAMS,
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the excursion to Boston over the Nickel Plate Road, Sept. 16 to 18, inclusive, at rate of $19.00 for the round trip. Good returning until Sept. 30, 1898, inclusive. Tel. Main 3389. (61-32-6)

make it a paying business. They keep bees on the old way—square boxes and black bees. My brother was the first one in this part of the country to introduce Italian bees. They are superior to any I ever saw. He has his apiary stockt with Italians. I like the American Bee Journal very much.

W. O. MAY.

Page Co., Va., Aug. 20.

◆

Gathered Most from Buckwheat.

I wintered 7 colonies of bees in old-fashioned chaff-hives; they cast their first swarm May 1, and I saved 11, the last one coming off Aug. 23. I had no hive for it, so I put it into a store-box. I think of putting it with the weakest colony after awhile. I have taken off about 100 pounds of honey in sections, and from the prospects I think I will get 400 or 500 more. I have for bee-pasture here white and Alsike clover, basswood and buckwheat by the hundreds of acres within a 5-mile radius of this place, but from some cause the buckwheat honey will be the largest crop, but the majority of the people here like it the best. This year's swarms I believe are going to store the most honey. I am selling my honey now at 15 and 17½ cents a section.

J. M. ROSS.

Clearfield Co., Pa., Aug. 27.

◆

A Poor Record.

The honey crop is very poor this year in this locality, and what little we have secured is of very poor quality, being mostly all honey-dew. Sometime I will give an account of this "heavenly" honey, as some people think it comes from above. It is my first failure in six years, but that is not going to stop the old stand by—the American Bee Journal.

P. J. SCHARTZ.

Cook Co., Ill., Aug. 29.

◆

Bees Did Fairly Well.

I see by some of the reports from this county that the honey crop is quite limited. I am of the opinion that this is not general. My bees have done fairly well. The spring opened very favorably, and the prospect bid fair for a large yield of honey. There was an abundance of white clover bloom. Shortly after the bloom, the weather changed suddenly to cool and rainy. After basswood came into bloom the bees began to store honey in the supers I think this was kept up for 8 or 10 days, and then ended. Not much honey was gathered from buckwheat, but now honey seems to be coming in quite plentifully. I think it is gathered from golden-rod, wild sunflowers, asters and other wild flowers. The weather is warm, and it is comparatively dry.

L. ALLEN.

Clark Co., Wis., Aug. 25.

◆

Report for 1898—Sowing for Bees.

The American Bee Journal has been a very great help to me in caring for my bees—in fact, I could not get along without it, and every number is carefully bound and preserved for reference. Last spring I started in with 24 colonies of bees in 8-frame Langstroth hives. These increast to 72, not counting 8 or 10 swarms which "took to the woods." Of these 72 colonies I have sold 4, leaving 68 on hand. Some of the first swarms have filled one super, and are now at

A Book Recommended by Dr. Gallup.

THE NEW METHOD

In Health and Disease.

By W. E Forest, M. D., 12th Edition, Revised, Illustrated, and Enlarged. This is the greatest and best work ever publisht as a HOME PHYSICIAN, and as

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It makes the way from **Weakness** to **Strength** so plain that only those who are past recovery (the very few) need to be sick, and the well who will follow its teachings **cannot be sick.** It is now in many families the only counsellor in matters of health, saving the need of calling a physician and all expenses for medicines, as it teaches Hygiene and the use of Nature's remedies, **not a drug treatment.**

All Chronic Diseases

are considered, and there is not a curable disease that has not been helpt by some of the "*New Methods*" given here; even those who have been pronounced **Consumptive** have been entirely cured. While for **Rheumatism, Indigestion, Dyspepsia, Constipation, Dysentary, Liver and Kidney Troubles, Catarrh, Emaciation, General Debility, Nervous Exhaustion, Diseases Peculiar to Women,** etc., the methods are sure, and can be carried out at one's own home and with little or no expense.

A Guarantee.

So confident are the publishers of the results, that they offer to refund the money to any one who will try "New Methods" thoroughly, if the book is returned in good condition.

The New Edition

is illustrated with a number of Anatomical plates from the best English work on Anatomy publisht, and others made expressly for this work; contains 300 pages, printed on fine calendered paper, and although the price of the first edition (much smaller in size and without illustrations) was $2.50, we sell this at $1.00, postpaid; or club it with the Bee Journal for one year—both for $1.60.

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The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only ONE book can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted, see postpaid prices given with the description of the books on this page Following is the clubbing-list:

1.	Langstroth on the Honey-Bee	$2.00
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4.	Bees and Honey [Cloth bound]	1.65
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work on the second, while the smallest and latest swarms are now in a fair way to store enough honey to winter on. Like almost all bee-keepers I would prefer more honey and fewer swarms of bees. Now for a question:

I sowed, last spring, about 1⅛ acres of buckwheat, and ½ acre of mignonette. It seems to be the opinion of most bee-keepers that it does not pay to sow anything especially for bee-feed, but in my opinion the mignonette certainly pays, and I shall sow more of it next year.

J. A. WATKINS.

Latah Co., Idaho, Aug. 16.

May Have a Fall Crop.

My bees did nothing more than make a living all season, until Aug. 20, when they started in the sections, and if the frost holds off until late in September I will have a fair crop of smart-weed honey. I have 62 colonies.

J. Q. SMITH.

Logan Co., Ill., Aug. 26.

Bees Have Done Well.

I could ill afford to keep bees without the American Bee Journal. My bees have done well this spring, and recent rains give promise of a good fall honey-flow. MRS. M. M. DUNNEGAN.

San Patricio Co., Tex., Aug. 26.

Small Yield Per Colony.

I have 45 colonies, and got no swarms, but have about 20 pounds per colony of comb honey. I never could do much with extracted honey, tho I would like to try some. I haven't extracted any for three years. WM. A. RIDENOUR.

Allen Co., O., Aug. 27.

A Cooling Well-Spring.

A little spring had lost its way amid the grass and fern;
A passing stranger scoopt a well, where weary men might turn;
He walled it in and hung with care a ladle at the brink;
He thought not of the deed he did, but judged that toil might drink.
He passed again, and, lo! the well by summers never dried
Had cooled ten thousand parching throats, and saved a life besides.—Farm Journal.

Convention Notices.

Minnesota.—The adjourned meeting of the Minnesota Bee-Keepers' Association will be held on Wednesday forenoon during State Fair week, at the place where the honey exhibit is made on the fair grounds. Make an effort to be there, and invite other bee-keepers who are not members to come and join the Association. L. D. LEONARD, Sec.

Minneapolis, Minn.

California.—The next meeting of the Fresno County Bee-Keepers' Association is to be held in the City Hall, Fresno, Calif., Wednesday, Sept. 14, at 10 o'clock a m. All honey-producers are requested to attend.

Caruthers, Calif. W. A. H. GILSTRAP, Sec.

Excursion to Boston.

The Nickel Plate Road will sell excursion tickets from Chicago to Boston and return for trains of Sept. 16, 17 and 18, at rate of $19.00 for the round trip. Tickets will be valid returning until Sept. 30, inclusive. On account of heavy travel at this particular time, those desiring sleeping-car accommodations should apply early to J. Y. Calahan, General Agent, 111 Adams St., Chicago. Telephone Main 3389. (58-32-6)

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This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

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☞ See Honey Offer on page 571.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Sept. 1.—The new crop is now coming forward and meets with a fair demand. Best grade of white comb honey in 12 to 24 section cases, 12c; that which is faulty, 10 to 11c; ambers, 8 to 10c; dark, 7 to 8c. Extracted, 5 to 7c for white; 5 to 6c for amber; 4 to 5c for dark. Beeswax, 27c.
R. A. BURNETT & CO.

Columbus, O., Aug. 30.—The present demand for honey is rather limited, owing to the large quantity of cheap peaches now arriving. It is also a little early for this market to take a large amount. Receipts are ample but little now arriving that can be called fancy. The greater part of it will grade No. 1 and No. 2. We quote: Fancy, 14 to 15c; No. 1, 12 to 13c; No. 2, 10 to 11c.
COLUMBUS COM. AND STORAGE CO.

Kansas City, Sept. 1.—Fancy white comb, 13@14c; No. 1, 12@13c; amber, 11@12c. Extracted, white, 5½@6c; amber, 4½@5c. Beeswax, 22@25c.

We are receiving few shipments of new comb and extracted honey. The demand is good for this time of the year.
C. C. CLEMONS & CO.

New York, Sept. 1.—We have a good demand for new crop comb honey, and it is beginning to arrive. Have sold some shipments at 14 to 15c for fancy white, 12 to 13c for No. 1 white, and 10 to 11c for fair white. We think these will be about the ruling prices this fall; exceptional fine lots may sell at a little more. Extracted is in good demand at unchanged prices. Beeswax dull at 26 to 27c.
HILDRETH BROS. & SEGELKEN.

Boston, Sept. 1.—Fancy in cartons, 13c; A No. 1, 11@12c; No. 1, 10@11c; No. 2, 9c.

New comb honey is now coming in, and while the demand is light owing to the warm weather, yet it is being well taken. Extracted, very little California on hand, and selling readily at 6½@7½c. Florida now arriving and selling at 5@6c. White clover scarce and wanted.
BLAKE, SCOTT & LEE.

Indianapolis, Sept. 1.—Fancy white comb honey, 12@12½c; No 1, 10@11c. Extracted, white, 6@7c. Beeswax, 25@27c.

Only a few arrivals of fancy white comb; market almost bare, and demand good. Quite a little comb honey from honey-dew is being offered, but there is simply no demand for the stuff.
WALTER S. POUDER.

Milwaukee, Sept. 1.—Fancy comb, 11 to 12c; A No. 1, 10 to 11c; No. 1, 9 to 10c; amber, 7 to 8c; old and dark, 5 to 6c. Extracted, white, in barrels or kegs, 5 to 6c; dark, 4 to 5c. Beeswax, 25 to 26c.

The market for honey is in very good condition; while there is yet a little of the old crop on hand, it is in very good order, and some demand, which will clear off everything before the new crop will arrive, very plentifully. There is already some receipts of new, but mostly extracted, and some very good quality, yet we fear the danger is in extracting too early, before the honey is fairly ripened. We anticipate a good demand a little later, and think values will remain about the same as present quotations.
A. V. BISHOP & CO.

Buffalo, Sept. 1.—Fruit prevents a large demand for any kind of honey at present. A few cases of fancy one-pound new comb can be sold daily at 11@12c.; but any grade below must be urged at proportionately lower prices. Would advise writing us before shipping here. There is no demand yet for extracted
BATTERSON & CO.

St. Louis, Sept. 1.—Fancy white comb, 10 to 11c.; No. 1, 10c.; amber, 9 to 10c.; dark, 8 to 9c. Extracted, white, 5½ to 6c.; amber, 5 to 5½c.; dark, 4 to 4½c. Beeswax, 20 to 22c.
WESTCOTT COM. CO.

San Francisco, Aug. 24.—White comb, 9 to 10c; amber, 7 to 8½c. Extracted, white, 6@6½c.; light amber, 5½ to 6c. Beeswax, 24@26c

Stocks are of very moderate volume, both of comb and extracted, and market remains firm at ruling rates, especially for water white or light amber of desirable flavor. There is a fair local demand and some business on foreign account. The bark J. C. Glade, clearing Monday for Europe, took 808 cases, valued at $3,250.

Cleveland, Sept. 1.—Fancy white, 13@14c; No. 1, white, 12@12½c; light amber, 11c; buckwheat, 9c. Extracted, white, 7c.; light amber, 6c.

The demand for honey is exceptionally good, owing to the crop in this vicinity being very light.
A. B. WILLIAMS & CO.

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38th Year. CHICAGO, ILL., SEPTEMBER 15, 1898. No. 37.

CONTRIBUTED ARTICLES

Is Bee-Keeping Overdone ?—How About It ?

BY C. P. DADANT.

Once in awhile we come across a bee-keeper who thinks the business is overdone, that there is too much honey produced, and that the editors of the bee-papers are to blame for inducing people to enter into an already overcrowded pursuit. Are there really too many bee-keepers ? or is so much honey produced that there is more than the world can consume ?

To answer the first of these questions it is only necessary to travel over the country a little. I have lately taken a trip to Omaha, to see the Exposition, and have stopt with friends at different places on the way. Nearly everywhere I was struck by the almost entire absence of bees in spots where hundreds of colonies could be kept profitably. In fact, one would almost think there were no bees in the United States if one did not know just where to find the bee-keepers. As you pass by the villages on the train you can see plenty of chickens, pigs, horses, cows, and even sheep ; fields of all kinds and meadows covered with bloom, and often an endless waste of lowlands where nothing is produced but wild blossoms, the honey of which is wasted one year after another ; but the apiary is an exceptional sight. Does one farmer out of every 20 keep bees ? I much doubt it. And in many instances when

The Great Willow-Herb in Full Bloom (See page 580)—From the Bee-Keepers' Review.

the farmer has bees, he has only just about enough to supply his own family with the honey they need, and, if he sells any, must deprive his children of it.

It is true that in a few favored spots—in the basswood regions of Wisconsin, or on the lowlands of the Mississippi, or of the Missouri—bee-keepers are more numerous, as also in some districts of Southern California; but, after all, these are exceptional spots, favored districts, which are as grains of sand to the sea. It is nevertheless a fact that the greatest portion of the land does not have one-twentieth of the bees it could support, and millions of pounds of honey go to waste for want of harvesters. Yet perhaps some crank may be found who will say that the bees occupy every foot of territory in the United States. Did I not just read in the Chicago Record the opinion of a noted man who claims that the United States should hold Cuba, "and everything else we can get," because we need "room to spread," as there is, according to him, "no place now for a young man to go!" This fellow would surely consider the United States overstockt with bees, if there was one colony to every one hundred square miles. His name is Chas. E. Hay, of Springfield. Pass it to posterity.

"Many men of many minds, many birds of many kinds."

I believe there is plenty of room, for centuries to come, on our own soil, for both our young men and for our bees; and I sincerely hope that we will not try to spread over foreign lands and give our enemies a chance to prove true the shameful assertion that has so repeatedly been made by some Europeans, that "America is fighting under the hypocritical plea of humanity, but in reality only for gain and conquest."

But I must not digress too far and forget that I am talking "honey" and not "war."

Now, if there are not too many bees, or bee-keepers, in the country, is there too much honey? Is honey so plentiful that every person in the land has all of it that he or she may wish and to spare? No, certainly not; but for all that, honey is too cheap, and it does not pay. So our critics will say. Does wheat-growing pay? Does hog-raising pay? Does cattle-raising pay? Is either of these lines of farming overdone? Yes, in one way. The farmer does not get enough for what he sells. But does everybody get all the beef to eat that he wants? It seems to me this question is very much like the question of labor.

A few years ago we had a young German working for us, who was fresh from the Fatherland. He could speak but broken English, and I used to ask him many questions about his former home. He liked America much better than Germany, and said it was easier to make a living here.

I said to him: "It is your standing army that causes the hard times over there. You have to feed nearly a million men and keep them idle during the best years of their life. That is what drains your country."

At this he protested. "No, sir; it is just the other way; if we did not have a standing army there would be just so many more men seeking work, and the poor fellow who has nothing but his labor would have to starve, as he surely could not find anything to do. There are too many laborers there already."

What do you think of this, friend bee-keeper? Have we too many men, too many bees, too much wheat, and too much cattle? Would it be better to have less honey, less bread, less meat, and less men? Has the old adage—that he who makes two blades of grass grow where only one grew before is a public benefactor—become a falsehood, and should we now consider that he is a public benefactor who will teach us how to decrease production so as to enhance prices?

No, I do not believe too much honey is produced. I believe that ten times as much honey could be consumed as is now produced if we had made as much improvement in the distribution of food as we have made in its production. I believe that if we could kill the adulteration of honey, and the fear of this adulteration, which is yet the greater of these two evils, we would have a ready sale of all the honey that all the bee-keepers could produce, and that there would be no longer any fault-finding with our editors, because they try to encourage the pursuit which gives them their living.

Hancock Co., Ill.

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Queens Laying in Queen-Cells—Moving Larvae

BY G. M. DOOLITTLE.

By what I read I see that there are still some who claim that the queen never lays eggs directly in the embryo queen-cells found in the hive during times of natural swarming and when the bees supersede their queen. This is only in accord with what was claimed years ago, it being put forth, at that time, that the queen had such an antipathy toward rival queens that it would be impossible for her to lay eggs in the cells prepared for her rival in the hive. But as eggs were found in these rudimentary cells by all, something must be put forth to account for their being there, so it was claimed that the workers carried the eggs found in these cells and deposited them there, keeping the queen from removing or destroying these eggs, and the larvæ which might hatch from them by clustering about the cells.

Right here I wish to place myself on the side with those who claim that bees never remove eggs, for in all of my experience of nearly 30 years I have never known of a single egg being conveyed from one cell to another, but in scores of cases have I known larvæ to be transferred by the bees to different combs and queen-cells. On this point I have been more particular than on most others—so much so that I have often found myself wondering whether those who told about bees removing eggs did not really mean larvæ. I call to mind one particular case, where larvæ were removed by the hundred, as it were, but only the eggs were found in embryo queen-cells, altho the bees had a laying queen. The circumstances were these:

A swarm came out one day when I was away from home, and as the queen had her wings clipt they returned. Not desiring them to swarm, the hive was opened in the afternoon and all queen-cells cut off. The next day this colony swarmed again, and before I had a chance to pick up the queen (she having run under the bottom-board of the hive) the bees commenced to return; and while they were doing so another swarm came out, and, without stopping to circle, as they usually do in the air, went directly in with the returning swarm.

Before things became settled another swarm issued from still another hive, and, almost immediately, another, or the fourth, came out and went in with those already returning, so that I had four prime or first swarms in and on that one hive; the queen in the meantime crawling out from under the bottom-board and going in with them.

As the three queens belonging to the other hives had their wings clipt they could not go with the bees, but were returned to their respective hives and the bees allowed to remain to see what would become of the matter. The next day the four swarms came out as one and were hived in an especially prepared hive, from which I secured more than 100 pounds of comb honey inside of two weeks.

An examination of the old hive showed hundreds of queen-cells started all over the combs; and, as I now remember it, nearly 200 of these cells had larvæ in them, swimming in royal jelly, while only two had eggs in them. As a number of these cells were built on the sides of the frames it would have been impossible for larvæ to have gotten in them (or the cells built over larvæ) other than by the bees carrying them there.

About this time such men as Gallup, Grimm, and others, began to advocate that the queen deposited in the queen-cells the eggs for all queens that were started while the old queen was in the hive, and, if my memory serves me rightly, Mr. Grimm saw a queen laying in a queen-cell, while Mr. Gallup believed they did so by the position of the egg in the cell. Later on, a hired man whom I had work with me in the apiary witnest the whole act of a queen laying in a queen-cell while I held the frame in my hand, and I have a letter in my possession from J. E. Ginn, of Ellsworth, Maine, which reads as follows:

"I have just seen [date June 22, 1893] the queen lay an egg in a queen-cell, the same being not more than 10 minutes ago. I thought I would write you at once so I could give all the details correctly. There is a one-inch space between the frames and the glass [Mr. E. has a glass in the back of a part of his hives], and the bees built a piece of drone-comb in this space, the same having drone-brood in it. Looking in to-day I saw a queen-cell half built on the edge of this in plain view. The queen was about an inch from this cell, and one of the bees was feeding her. After a moment she past in between the frames for a second or so, when she came back and went directly to the queen-cell, put her head up into the cell, then curving her abdomen, she inserted it well up in the cell and deposited the egg. After laying the egg she again examined the cell, remaining in it with her head perhaps 10 seconds. I have written at some length, for the queen seemed to be so particular. I have seen queens lay in worker-comb many times; and while they would examine the cells before laying in them, yet I never saw one look into a cell after she had laid an egg in it, as did this queen in the queen-cell she had laid in."

It will be noted that the correspondent says that the queen inserted her abdomen "well up in the cell," thus assuming the position she does in laying in a worker-cell, as far as the cell is concerned. I touch on this matter as one of the strong points brought up by the doubting ones is the ridiculous position the queen must occupy when laying in a queen-cell. But why should not a queen lay in a queen-cell as well as in any of the other cells in the hive? None of the eggs laid in queen-cells, produced during natural swarming, can possibly grow into rival queens to the old one, for she has either departed from the hive before any of the young queens hatch, or the cells are torn down by the workers on account of a scarcity of honey or unpropitious weather, whereby swarming is postponed indefinitely.

When the issue went forth by the Creator of all things—"Go forth, multiply and replenish the earth"—it became just the thing all animate creation desired to do, and hence the queen has just as much desire to do her part toward the replenishing of the earth with colonies of bees as have the workers, all working together in harmony, as far as the issuing of a prime swarm is concerned, and the leaving behind of that which shall insure the perpetuation of the old or parent colony.

Of late years I have often wisht there was no such thing as swarming, but God has so ordered it, and I am faithless in regard to non-swarming bees, for what God has ordered the puny arm of man cannot well set aside.

Onondaga Co., N. Y.

Laying Workers—How to Get Rid of Them.

BY EDWIN BEVINS.

It was, I presume, not the intention of Mr. C. N. White, whose series of articles have been publisht in the American Bee Journal, to treat exhaustively or even largely any one topic relating to apiarian practice; but particularly unsatisfying was his reference to the subject of laying workers. Not more so, however, than has been the references to it of all the other writers whose writings I have read.

The question, "What shall I do with a colony having a laying worker?" is one that is often found in the bee-papers. The questioner is sometimes told to break up the colony by distributing its combs among other colonies; sometimes he is told to introduce a fertile queen, and again he is told to carry the colony away to a distance from its old stand and shake all the bees off the combs—this in the hope and expectation that the laying worker or workers will get lost in the operation.

The two methods last named are the ones advised by Mr. White. Now, it is my experience that if one gives a fertile queen by any of the direct methods in common use, he will as a general thing have his labor for his pains. The other method mentioned by Mr. White is more laborious and equally uncertain in its results.

Distributing the combs of the laying-worker colony among the other colonies is less satisfactory to me than any other method yet named. When one is building up an apiary he does not like to suffer any diminution of the number of his colonies. Again, in a small apiary, one may not have the other colonies in condition to take the frames of the laying-worker colony. In a large apiary there would probably be no trouble of this kind, but the distribution might be found necessary at a time when it might be better to leave the other colonies undisturbed. In any event the distribution is a laborious and disagreeable work. Even if distributed the bees would not be of any great advantage to the colonies thus strengthened, as it is likely they are bees pretty well advanced in life.

There are two easy and sure ways of disposing of laying-worker colonies so as to get all the service out of the bees that they are capable of rendering, and at the same time keep the number of your colonies up to what it was before.

The first way is to place the hive having the laying worker over a strong colony with a fertile queen, placing a newspaper with a small hole in it between the two hives. The bees will unite peaceably, and when considerable worker-brood appears in the upper hive the hive can be placed on another stand, and the bees will rear a queen from the brood if you leave the old queen in the lower hive; or, you can introduce a fertile queen after about three days from the time of the removal.

The other plan contemplates the taking of a couple of frames of hatching brood from some of your hives and placing them in another hive over a strong colony with a frame having wire-cloth nailed to both sides of it between the two hives. Then release a fertile queen and her escort on these two combs, and in a few days you will have a nucleus strong enough to take care of your queen. Then set this hive with the nucleus down by the side of the hive holding your laying worker. Then every two or three days transfer a frame with its bees from the laying-worker hive to the nucleus. By the time that all but two of the frames are placed in the new hive your queen is doing business there, and all is harmony in the hive.

No suggestions are needed as to the disposal of the two frames taken to form the nucleus, but I will just say that they can be returned to the places from which they were taken, or these places can be filled by the frames remaining in the laying-worker hive.

I will add, too, in this connection, that a laying-worker colony, if strong enough, can, at the proper seasons of the year, be utilized for the building up of two or three new colonies just as well as for the building up of one. Keeping brood warm is about all these laying-worker bees are good for, anyhow.

By taking a couple of frames of hatching-brood and treating as I have mentioned, you have an absolutely safe way of introducing any queen, no matter what may be her value. These laying-worker bees, if discovered at the right season, instead of being a bugbear may be turned to good account as an aid in the improvement of your stock.

Decatur Co., Iowa.

No. 7.—The A B C of Marketing Honey.

BY HERMAN F. MOORE.

[Continued from page 562.]

You will notice that some writers on selling honey say, "Always sell for spot cash." Another says, "I let them have the goods and collect on my next trip." The writer may be excused for saying a few words on this seemingly threadbare subject.

Almost any one will agree that farmers as a class are more apt to fall into a slipshod method of business than tradesmen. Also, that in the big lines of trade in the great cities, correct business methods are more sure to prevail than elsewhere. Let us learn a little from the methods of the great business houses. Take for instance the business of a large wholesale grocery house having trade in four or five States. The credit department is one of the most important in their business. A man is selected to run this department that has been in their employ for many years, often since childhood. This great care is used in selecting the credit man because no department has more to do with the permanent success or speedy failure of the business than this.

Let us suppose a letter is received from a prospective customer, containing a list of goods he wishes to buy to the amount of $1,000. Now, on general trade the wholesale houses are accustomed to allowing 30, 60 or 90 days as credit to those in whom they have confidence. You can see at once the importance of deciding rightly as to whether this man is entitled to the customary credit or not. Great volumes of Dun's and Bradstreet's commercial reports are examined, also any special reports that may have been furnisht from the customer's town. If the credit man is on friendly terms with John Smith, credit man for a rival house in the same line, he steps over to see whether the customer has owed them a bill and not paid it, or whether they have special reports on him, favorable or otherwise. If after all this labor the report on his case seems unfavorable, a trip may be made to the customer's home town, if not too distant, to see him personally and talk with him face to face. Or, the telegraph may be used to ask some trusted attorney to look over the ground and the probabilities in the case. There are without doubt millions of money lost every year in our large cities by reason of too great competition in business, and lack of care in selecting customers.

A personal friend of the writer, in the woolen trade, was wiped off the earth financially by a matter of about $50,000 of uncollectable bills. Hundreds of business houses are added to the long list of failures every year by giving too much credit. In these lines of wholesale business they are obliged to give credits. If you take the broadest view of general business you will see that business would be paralyzed without credits.

Why all this care and labor? This is the way they reason: Once a rogue always a rogue. If your father was a good business man, and successful, and paid his debts promptly, they reason that the son will do likewise. If a big business has been run for 5, 10 or 15 years successfully, they reason that success will be theirs for as many more years, in all human probability. But, alas, "the best laid plans of mice and men gang aft aglee."

It has been said that "misfortune makes men rascals." I think this is an error, but the effect seems the same as far as their creditors are concerned.

Take the case of the hardware man selling plows and tools of all kinds to the farmers, and waiting till after harvest or husking for his money. In his case about all he cares for is whether the customer is honest. Often his problem is a hard one, for he must refuse credit if he follows his best judgment, to a neighbor, one who will be his enemy if credit is denied.

Let it be clearly understood that only strict business must govern. Your duty to your family requires that each case be settled upon its merits regardless of friendship or nearness of residence. It is always harder to draw the lines of business strictly with neighbors and friends than with strangers.

In the great business houses some require the credit man to stand any losses that are caused by his act. Other houses are more liberal, and only require losses made good where a fault or negligence has been committed. Long service as a credit man in a large, wealthy house oftentimes will cause the firm to overlook losses that would be fatal, in a small business, both to the firm and the credit man himself.

A few rules can be gathered from the foregoing. You must of necessity be your own credit man. You must stand *all* the losses, both small and great, yourself. Your consolation must be that no one can discharge you. Remember that honey is a luxury, and that ordinarily any one who has not one or two dollars to pay for a small purchase of honey should do without it. But there are many exceptions to this. Farmers sell produce at certain periods. Men are paid by the month. If you set your foot down, that you will not sell except for spot cash, you will certainly suffer a reduction of 15 to 20 percent in your year's business. But use your brains in every case, and where you are in doubt *don't give credit.*

Every man, every business, bears certain ear-marks that speak to the intelligent observer a clear language as to prosperity and permanence. A nice barn, comfortable house, owns the place, sleek horses, fine flocks of poultry, neat wife, clean children, etc., will tell you plainly if you ask whether you will seek in vain for your two dollars on your next trip.

Such cases as this will come to you: "I have been hard up lately; had a good deal of sickness; would like some honey, but haven't got the money." Don't put this case as a business problem at all. Figure this as almost a certain loss. Call it charity, and if your duty to your family and your own obligations allow the donation, why, make it freely, if you think it is a proper case. It is very often a proper case to refuse. There is a great difference between asking credit for honey and trying to buy a barrel of flour on time. In general, any one who asks credit of a stranger for a plain luxury—something he can get along without—should rightly be an object of suspicion. An honorable man will be more ready to ask favors of one who knows him and his reputation, than from strangers.

Look your ground over carefully. Note how other business men give credit. If you know a good business man near by, go to him and put certain questions to him that bear on your case and trade. You will learn many valuable principles by talking with one who has made business and credits a life study. In case of doubt about any particular person, go to his postmaster or to his grocer. Tell them in confidence that you expect to have some business with Blank, and ask if he is a safe man to trust. You will in many cases get an entirely candid answer. Remember a bad debt means loss of your honey, loss of the customer, loss of the time consumed in making the sale and in trying to collect.

Many of you will find that spot cash is the best rule for the honey-trade, even where it might not be possible for the hardware.

After looking over the ground carefully and conscientiously, make a set of rules by which to govern yourself. Then when askt for credit say, "That is contrary to my rule in this case. I should like to oblige you, but I will be unable to do so *now.*"

Such an answer will convince the customer you wish to treat all alike, and may turn aside any feelings of resentment that might arise on being refused a favor. Cook Co., Ill.

Great Willow-Herb—Its Home, Habits and Honey.

BY W. Z. HUTCHINSON.

Years ago, when I lived at Rogersville, I for several years made annual trips to the home of two ladies living in Northern Michigan, near Farwell, and bought and brought home a portion of their bees. I well remember that among other dainty viands appearing upon their tea-table was a comb of the whitest, sweetest honey I had ever tasted. The flavor was not very pronounced, but contained a suggestion of spiciness. Upon inquiry I was told that this honey was from the great willow-herb. It is known under various names, such as fire-weed, Indian pink, rose bay, etc. Its scientific name is *Angustifolium epilobium.* Later, when collecting samples of different kinds of honey to exhibit at fairs, I sent for a bottle of this honey. When it came and I held it up to the light, I could compare it with nothing else than a bottle of spring water—it was so clear. It certainly has no more color than so much water.

This plant grows from two to six feet in height, and, as a rule, inclines to a single stalk. The blossoms are a dark pink and arranged in a cluster around the central stalk. In fact, they remind me of the phlox of the flower-garden. One peculiarity of the bloom is that it continues from July until frost. So long as it is in bloom there seems to be a cluster of buds pushing themselves up from the center of the bloom. As these buds unfold, others take their place, and so the stalk pushes up and up, always tipt with a sprig of buds, below which is a cluster of bloom that in time gives way to seed-pods. Thus we have, on the same stalk, buds, blossoms and seed-pods, and, in many instances, the oldest pods have burst, and winds are scattering the downy seeds far and near. I think such seeds might be carried in great numbers—well, possibly hundreds of miles. Perhaps this explains why it springs up, apparently in a spontaneous manner, after the ground has been burned over by fires; whereas the fire simply burns the turf and furnishes a seed-bed for the wandering seed. It grows most profusely among the stumps and burned forest districts of Wisconsin, Northern Michigan and Canada.

Two or three years ago, in the month of June, while on my way to visit my father and brother in an adjoining county (Tuscola), I noticed a few stalks of what I took to be this plant growing by the roadside. I had never seen any of it before, but I had read descriptions of it. In August my brother wrote me that the highways and byways, hedges and swamps, old clearings and "slashings" were fairly purple with the bloom of the willow-herb, and the hives were filling up with honey to beat all. I packt up my camera and took another trip expressly to get a characteristic view of this plant on its native heath. The result is the picture which shows the willow-herb right in its glory. The splashes of white are seed-pods that have burst and are scattering their contents to the four winds.

As a rule, willow-herb yields honey every year. In my knowledge of the matter it has failed once in a dozen years. For two years in succession our Michigan bee-keepers have met at Mt. Pleasant, which is the region of country where the willow-herb flourishes at its best; and it really makes us outsiders feel just a bit envious to hear those folks talk about their 100 and 125 pounds of surplus honey, per colony, each year.

There are thousands and thousands and thousands of acres of this plant in Northern Michigan that actually waste their sweetness on the desert air. If I were going into the business of honey-production as a specialty, I should go to Northern Michigan where I could have the benefit of wild raspberries, clover, basswood, and willow-herb. There are locations in that part of the State that are veritable bee-keepers' paradises; and they can be found by patient search.—Bee-Keepers' Review. Genesee Co., Mich.

Facing Comb Honey—Price of Honey.

BY PROF. A. J. COOK.

A few weeks since I was visiting Lemon Grove, San Diego Co., arranging for a Farmers' Institute. Lemon Grove is one of the famous strawberry regions. I was invited to tea, and as my host was in the midst of the strawberry harvest, and much driven to fill his orders, I volunteered to become for the nonce one of the army of pickers. I take naturally to work in a fine strawberry-field. I showed very soon that I was a novice, for I removed all the stems, whereas the market wisht stems and all. But my chiefest blunder was in filling the box evenly, so that one, as he delved to the bottom of my boxes, would find all alike from top to bottom. I was shown that I must place smaller berries below, and reserve a goodly number to face the box at the top with large, even highly-colored berries. I said, "Is that quite honest?"

The answer was, "Yes; everybody does that, so it is expected."

I said, "Is it wisdom? Would not an even, honest pack beget a reputation, sell more berries, and secure a better price?" Of course the berry-grower thought not, else his practice would change.

Forty tons of berries were shipt from Lemon Grove into San Diego the past season. I presume my friend was correct.

All are faced with superior fruit, which is no indication of what lies beneath.

A few days afterward I was in San Diego, and took pains to examine the berries at the fruit stands. I found all packt as my friend had stated—the best to the *front*.

One of the hucksters that comes to our door to sell fruit here at Claremont, has the same theory. His boxes always wear a smiling face, but he who digs beneath finds a different aspect. Mrs. Cook only patronizes him when our necessities or convenience would otherwise be ill served, or not served at all.

I know of several fruit-growers that have stemmed this temptation to deception and pretense, who always pack evenly and honestly. These men have that "peace within that passeth all earthly dignities, a clear and quiet conscience." These men sleep well of nights; they may stand by and see their boxes emptied with no sense of shame and no disquiet. And tho the best, this is not all their gain; they are trusted, their fruit is purchast at the top figures, and always taken without question. Their practice has earned them a reputation which is as excellent as their fruit—as good as their pack.

I believe the same holds true of honey. Facing with white or better-filled sections may deceive once, and secure a little more of "that which we may grasp thus," but soon our habit will be understood, our business methods will be questioned, distrust will dog our footsteps, sales will be slow and labored, and, worst of all, the best fun of it will be lost to us—the fun of doing a genuine, square, honest business.

The fact that a fine appearance always attracts attention and wins favor, places a tremendous temptation in the way of the ambitious man. But the true Christian course, and in the end the politic, business course, will push aside all thought of such action, and make things just what they seem. The wisest honey-producer will so pack his honey that the outside tier of sections will truly label the whole case.

HOLD FOR HIGH PRICES.

I was askt a few days since, by a gentleman who has secured a good crop of honey even in this season of general scarcity, whether I would advise him to hold on to his honey. So far as I can determine, the crop throughout the country this season is light. Very few localities have a full crop, while in most sections, like Southern California, the crop is very light indeed. Altho honey is not so much a staple article as to be governed in price by the law of supply and demand, as are many of our agricultural productions, yet it does follow the law in some degree, enough so so that all should hold for a reasonable price.

Had I first-class extracted honey, here in Southern California, I should hold it for 6 cents, and an equal grade of comb honey should command at least 10 cents.

Los Angeles Co., Calif.

Honey-Dew, What is It?—An English View.

(*An Editorial in British Bee Journal.*)

It is more than probable that 1898 will be set down in bee-history as a record-year for the production of what is known as "honey-dew." Anyway, with over 30 years of active bee-experience behind us—and an intimate knowledge of current bee-literature during 25 of those years—we venture to say that nothing so remarkable in the way of honey-seasons, so far as the extent of the area covered by the plague, has occurred within living memory. Honey-dew has, no doubt, been abundant enough in bygone years, at rare intervals and in scattered districts wide apart, quite enough to spoil or seriously damage the crop of many a bee-keeper; but none will remember when the mischief was so generally prevalent as this year. From all parts of the kingdom we have reports, accompanied by scores of "samples" wherewith to verify the same, declaring that the like of it has never been seen before; a proposition with which we entirely agree. Since we briefly referred to the matter last week, it has been demonstrated, to *our* satisfaction at least, that honey-dew has "fallen" not in equal abundance everywhere, but quite plentiful enough to cause a serious monetary loss in the value of their crop of honey to a large number of our readers.

The varying nature of the complaints just received as to the extent of the evil, and the numerous enquiries regarding the nature and real cause of it, render it incumbent on us to say a word or two on the broad question, What is "honey-dew?" so-called from its being supposed by the ancients to descend from above, as does the "dew" known to us all. That it is not "sent from heaven like the manna in the wilderness," most bee-keepers will agree; but, let us add, neither is it quite so bad as to warrant its connection with the "other place," dominated by "*Beelzebub*, the lord of flies," as is, again jocosely, added by a reverend friend. That is to say, not in the exact sense in which some regard the simile; and especially those who claim the title of bee-experts.

To be very plain then, and to remove a false impression—where such exists—in regard to honey-dew, let us say it is not "the excreta of the aphis, or green-fly," as some suppose. "Excreta" is the refuse, or waste matter from food which is, perforce, discharged from the animal body after all the nourishing material has been extracted. "Honey-dew," on the contrary, is a saccharine substance, or sweet juice which at times, and under certain atmospheric conditions, exudes from the surface of the leaves of trees and plants. Consequently, there is no real analogy between the two substances. The connection of the aphidæ with the matter no doubt arises from the fact of bees visiting trees where the so-called honey-dew abounds, and carrying off the saccharine substance to their hives. Now, when we state that in some seasons (happily rare)—of which we may quote the present one as a model for enforcing our argument—so abundant is honey-dew that it is discharged by the aphidæ in the form of a fine liquid spray on to the surrounding leaves, and, after accumulating there, it drops from the leaves in such quantity as to wet the ground beneath. This being so, it will be readily understood by readers what an amount of damage will thus be done so far as the quality of honey already stored in the hives.

But we must go still further in differentiating between aphidian honey and the nectar gathered by bees from flowers, in order to account for the very objectionable error regarding the nature of honey-dew. It is generally known to bee-keepers that the bee regurgitates the contents of its honey-sac directly into the store cells by means of the long proboscis-like tongue with which it gathers the nectar. On the other hand, the sweet juice referred to above is ejected by the aphidæ through two straight tubes, which project beyond the body of the insect above the ordinary orifice. This fact, no doubt, gave rise to the "excreta" notion, which is an entirely erroneous one. It is bad enough to acknowledge the existence of aphidian honey as a veritable transformer of good honey into bad, but there is no reason why we should make bad worse by propagating errors of this kind.

So much, then, for honey-dew, which it must be admitted has spoiled a good part of the crop gathered during the past month, and operated very adversely against the success of honey shows so far held this season. It was hoped, however, that Scotland and Ireland would have been spared from the blight which has fallen on England, and, we fear, Wales; but, judging from reports to hand, our Scotch and Irish friends have fared little better than our own northern counties of Yorkshire, Cumberland, and Durham, while the latest news we have from Ireland refers to a honey show held at Ennis, Clare county, where we learn that "the remarkably large amount of honey-dew that showed itself in both comb and extracted honey served to disqualify many otherwise fine exhibits."

The question then arises, Will honey of good quality have already been secured, or is it likely to be got this year in sufficient quantity to meet the demand for such? We are led to make this inquiry because of our having only two or three days ago received a couple of samples which were to us a revelation for honey of 1898! One of the two is simply perfect in color; good in consistency and aroma, and of capital flavor; in fact, an excellent honey for any year. The second is far behind on all points, but still a good honey compared with what we expected to see, bearing in mind what had gone before. If, however, there are even a few districts where bees are kept in quantity and where honey such as we are referring to has been obtainable, the inevitable conclusion follows that the blight has not extended entirely over the three kingdoms. It is also just possible that the recent heavy rain (which has gone a long way towards exterminating the aphidæ in our own district of the south) may be more helpful in saving the crop further northward. Therefore, as good honey this year will doubtless fetch full value, those who are fortunate enough to secure it should take the hint and act in accordance therewith in fixing prices.

We fear, however, that the bulk of our readers will have to consider a large proportion of the dark honey gathered this season as food for bees only.

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Cross Bees—Feeding for Winter.

1. I have a colony of bees which is very cross. If I take a frame out of the hive they will come out and sting like angry hornets. What is the matter with them? and what am I to do with them?

2. What is the best to feed for winter? How would you feed it, and where?

3. What is the best to do, to feed the bees in winter, or feed them now for winter? WISCONSIN.

ANSWERS.—1. There's no little difference in the tempers of bees, just as there is among people. When a colony shows such a vindictive disposition, it's a good plan to give them a queen of better blood. Very likely the flow of honey has stopt, and that makes matters a good deal worse. If robbers have been annoying them, they may take out their spite on you. Be careful not to do anything to excite robbing. Do your work in the forenoon, if you must handle them, for generally there will be a little gathering in the forenoon. Don't leave combs of honey or brood exposed to robbers, but keep everything covered up.

2. There's nothing better than sealed combs of honey. Get in the way of looking out for this, and always have some on hand. If you have nothing of the kind, feed granulated sugar, best quality. If you have no feeders, you can use the crock-and-plate plan lately described in these columns.

3. By all means don't think of waiting till winter. Don't wait a day. Go at it right straight. If you have no fall flow, August is a good time to feed, or as early in September as you can accomplish it.

Robbing—Bees Drawing Out Comb—Rapid Well-Feeder.

1. I rather injudiciously opened a number of hives late one afternoon, two or three weeks after a flow had ceast, in order to remove some dark honey from strong colonies, wherewith to feed weak ones. This resulted in wholesale robbing, and at 8 a.m. the next morning I found a battle royal going on at every one of the hives which I had opened. My first thought was to try a remedy I have more than once successfully used, viz: painting about the flight-holes; but it is messy and troublesome, and I concluded I would give each and every hive attacht a good shower-bath, and which I have found to answer *sometimes.*

It was a very close, sultry morning, with not a breath of air stirring, but before I got back to the bee-yard with the garden watering-pot, a deliciously cool breeze from the sea had suddenly sprung up. I doubt if I was away 15 minutes, but during my short absence robbing had greatly diminisht, the invading forces being quite withdrawn from some of the hives; and I put it down to the sudden change of atmosphere; for I have often observed that when a cool, fresh breeze is blowing, hives may be handled with impunity, where otherwise it would be dangerous to even lift a cover.

But I must also tell you that just before going to the yard that morning I had uncovered some cases of sections in my workshop, which I had taken off the previous evening, and which, containing a mere sprinkling of honey (too little to extract), I wanted the bees to clean up, leaving the window open to give the bees access to them. On returning from the yard I found my workshop full of bees, going for these partially-filled sections in grand style. I then began to reason that this counter attraction was the cause of the siege being raised at the hives, and that atmospheric conditions had nothing whatever to do with it. If this conclusion is correct, then how would it answer, in your opinion, should robbing and fighting be, through carelessness or accident, set up on a large scale, to at once place a shallow tray or two of diluted honey outside the apiary, but within easy smell and reach of the robbers—as a counter-attraction? If the remedy is as good and as certain as I have reason to believe it to be—and it was permanent—it is worth knowing, and as one of those things which every—even the most careful—apiarist would do well to make a note of. What may be your opinion of the matter? Have you ever had a like experience? It seems to offer a very simple means of curing an occasionally (in the best regulated apiaries) very troublesome disorder.

Could not, on the same principle, the horrors of war be in a measure averted? Just when a battle begins, have a special corps hovering about the flanks and rear of the combatants, with wagon-loads of delicious honey-jumbles—counter-attraction!

2. As freight, etc., on the new Weed "drawn foundation" would come too costly for me, I have to set my own little workmen to make it, feeding strong colonies "during the recess," and making them draw out super foundation. In filling frames for that purpose with the ordinary super foundation, I came across a couple of sheets of "extra thin." I had had it by me two or three years, but I think the other was just as old. Anyhow, tho I put this "extra thin" right in the center of the super, the bees, while drawing out the other to my greatest satisfaction, would have none of it; they wouldn't look at it. I have had it on now 14 days, but ne'er a draw—it remains just as when I put it on. Why is this? Have you ever noticed this with sections, viz: that the bees will neglect the "extra thin" in favor of the ordinary super foundation, or be more dilatory in getting to work on it?

3. I have a big roll of queen-excluder zinc, and no use for it. How would it be to use it for separators? Would it answer, think you? If free passage is of any advantage, that ought to give it. Mr. Pettit's suggestion of ventilating with wedges, and followers jabbed full of holes on either side of the sections, with ¼-inch space between such perforated followers and the super's walls, is, I should say, excellent. But instead of taking the pains to bore countless holes in these wooden side-separators, dont you think he might preferably make them of excluder-zinc?

4. I forwarded Editor York a description and a sketch of my rapid well or "climax" feeder. May I ask you to be so good as to give your opinion of it? I began very cautiously with its use, first trying it on only two hives, for I thought it was too simple and too convenient and easy not to have some great objection lurking about it somewhere, but everything having workt smoothly and nicely so far, and no objections having revealed themselves, I set to work and made more, and am now using them on several of my hives, and that with the most intense satisfaction. I can feed half a dozen of the colonies having this feeder while my mate is feeding one with a "Boardman," and with less trouble, too! There must surely be some objection to it which I have not yet discovered, or how is it possible that so simple, safe, rapid and really pleasant a method of feeding has not been long since generally adopted, in preference to all and every one of the numerous other messy, irritating (both to bee-keeper and bees) and troublesome contrivances whose praises are so loudly sounded in the papers and bee-books.

With these simple "Drawer" or "Well" feeders, a mere child could be trusted to feed a large apiary; and I will challenge anybody to produce a better or more satisfactory feeder, better in any way! If you can see any fault to find with it will you please say? Personally I am so delighted with it that I consider no floor-board complete without one; and would have, had I my way, no floor-board (unless specially ordered otherwise) sent out from the factory without this attachment, as essentially part and parcel of a hive. SOUTH AFRICA.

ANSWERS.—1. If robbing commences, and you set out some feed at a short distance from the hives, the bees will be very likely to go right on with their robbing if they have never before had feed in the same place. But if some days before, they have had feed given them at a certain place, and it is set out again at the same place as soon as the attempt to rob begins, the attention of the robbers would very likely be diverted providing some weak or queenless colony had not been attackt and partly overcome. Of course there's a big difference between a genuine case of successful robbing and the attempt to rob from strong colonies able to protect themselves. Not long ago, in a European journal a kindred idea was presented, the advice being that in case one wanted to work at hives in a time of scarcity, it could be made safe by first getting the bees to work on some feed at a little distance from the hives.

2. Your question is rather too much for me. If the foundation was as fresh as the thicker, and both kinds put on at the same time, I see no reason why they ought not to work one as well as the other. If the foundation had previously been on the hive and not drawn out, or if it was left on the hive for some time whether partly drawn out or not, so as to have a very slight coating of propolis, then the bees might be expected to leave it untoucht, or at least to be very slow about commencing upon it. I have used extra thin so little that I hardly know how it does compare with thin. I know that when it is left on the hives and not used, the bees seem more

inclined to gnaw the extra thin than the thin. I can hardly think age was the trouble. I used a good deal of brood foundation this year that was six years old, and I could not see but the bees accepted and workt it as well as any.

3. Excluder-zinc will probably be all right for separators. Very likely Mr. Pettit would tell you that he objected to the cost of the perforated zinc, altho it is just possible that he preferred larger perforations than were to be found in the zinc. Even altho he might make a few of perforated zinc cheaper than he could make the wood ones by hand, he was no doubt looking out for the general future, and with proper machinery no doubt the wood separators could be furnisht at lower price than the zinc.

4. That's a dangerous question to answer. When a woman holds up her baby before you and says, "Isn't he sweet?" you're in a bad box if you can't honestly answer "Yes." However, Africa's a long way from here, so I venture to say that it needs only one reason to make your feeder objectionable, and that is that it requires syrup to be made. The day of feeding syrup is past with me and with many others. I have given my bees a little more than 700 pounds of sugar so far this season, but it was given to them as dry sugar and water added afterward. That's less trouble than to make syrup. When the dry sugar is put in, there's no danger from robbers, even if the feeder is left standing open, as dry sugar doesn't tempt the robbers. Then water is poured in, and if any of the water is spilled it does no harm. If syrup is spilled there may be trouble.

Another reason why your feeder could not be used in many apiaries, is that the hives stand back to back, in groups of four, an arrangement that would not be readily given up, even if it caused a good deal of inconvenience in feeding. Feeding is a thing that comes only occasionally, and the convenience of arrangement is a thing of permanency.

You can hardly draw out the drawer-feeder in less time than you can lift a cover off a Miller feeder, and there are times when a colony will work in a feeder on top when you could not get them to go down cellar. But perhaps the distance to Africa is not sufficient to make it safe to say more.

The "Illick" Hive-Tool.

The tool I use to raise supers, scrape propolis, take out frames, etc., is made out of the back half of an old file. The wide end is drawn out and ground to a chisel edge. The small end is bent down about an inch, and also thinned down—the heel or fulcrum is rested on top of the frame towards me and the sharp point under the frame to be raised. The frame comes every time, no slipping. J. F. ILLICK.

ANSWER.—Mr. Illick has gotten hold of two important points in the construction of a hive-tool. One end must be a straight chisel edge for raising supers, etc., and the other end must be crookt for moving frames. One trouble in getting a tool to suit every one is that all do not use frames alike. Mr. Illick rests the tool on the frame toward him, evidently pushing the frames from him as he loosens them. That wouldn't work in my hives with frames at fixt distances. The dummy is next me, and the frames must be loosened toward me. But the same tool would work. It is desirable that the corners of the chisel edge be quite rounding. Then they will not catch in the wood when you crowd between hive and super.

Contracting Foul Brood—Preparing Bees for Winter.

1. Is there any danger of bees contracting foul brood, if allowed to eat honey from a frame containing also larvæ which have been killed by chilling them?

2. Is it positively necessary to have chaff below the brood-nest in a chaff hive?

3. What is the latest time in the season that bees swarm?

4. When would you begin to put bees up for winter?

IOWA.

ANSWERS.—1. If there was no foul brood in the combs, I should have no fear.

2. While it may be better to have chaff below, it is not nearly of so much consequence as at the top and sides.

3. I don't know. It depends upon the season. They may swarm any time when warm enough and gathering enough. Probably in Iowa they might swarm as late as the first or middle of September. But the general swarming business will probably be through in July, with occasional cases in August.

4. In August. See to the important part of having plenty—not only plenty but abundant—stores for winter, unless pretty sure you'll have a fall flow. See that each colony has a good laying queen. Other things may come on later, but get everything done a little before you think it necessary. From your second question you seem to have chaff hives. With them you can't be any too early getting ready, after this time, unless bees are storing so much that you must see to giving them room.

Number of Bees in a Colony—Tiering Up.

1. About what number of bees do you suppose it would take to make a strong colony? I am working mostly for increase.

2. How high would you advise tiering up on the brood-chamber?

3. I have two brood-chambers with eight frames in each, and the bees occupy all the frames. Will they winter safely?

VIRGINIA.

ANSWERS.—1. When you reach 50,000 you have a strong colony. You are not likely to have that number as the progeny of a single queen until the season is well advanced. It is possible that you might reach double that number. In the spring you'll do well if you have 10,000.

2. I'd pile on just as long as the bees showed they needed more room. They may need two or three stories, and if they have much honey they may need a good deal more. You're not likely to do any harm by giving too much room after the weather gets hot, but you may do harm by crowding.

3. You will probably find they winter just as well with two stories as one, and possibly better.

Milkweed Pollen-Masses.

There are some bees in two of my colonies that have many feet or claws to their legs, also on their antennæ. They are smaller than the workers, do not seem to work any. The workers take them by the collar and walk them out, police fashion. What are they? and will they do any harm?

INDIANA.

ANSWER.—From the masht specimens enclosed in your letter, I should say your bees have been working on milkweed and the pollen-masses cling to them to such extent that they can hardly get about, and the other bees expel them. As soon as the milkweed is through blooming the trouble will disappear. A few bees are lost in this way, but perhaps the bees gather enough from milkweed to pay for the loss.

Sealed Empty Cells.

Why do bees seal up empty cells in the supers? In uncapping some extracting-frames I found the bees had sealed up some of the empty cells? ARIZONA.

ANSWER.—I have been very much puzzled sometimes to understand what it meant to find a sealed cell entirely empty. It hardly seems the bees would take the trouble to seal up a cell containing nothing but air, and I've thought it just possible the cells may have been filled with honey and sealed, and then the cell may have been opened through one of the walls from an adjoining cell.

Referred to the State Botanist.

Within find a few samples of a shrub for name. They will show you blossoms, undevelopt berries, and some berries about fully developt. The latter one is very small this year on account of the great dryness; they were twice as large in years gone by, as I can recollect. CALIFORNIA.

ANSWER.—The shrub is one I am not acquainted with. Your State botanist will be able to tell you what it is.

Honey as Food is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey among should-be consumers. The forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 30 cents; 50 for 50 cents; 100 for 90 cents; 250 for $2.00; 500 for $3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

AMERICAN BEE JOURNAL

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Omaha Convention will have reacht its closing sessions when the majority of our readers receive this number of the Bee Journal. Week after next we expect to begin publishing the full report of the convention proceedings. This should make interesting reading for many weeks. All who were not fortunate enough to attend the convention will thus be able to get it "second hand," which is next best thing to being present in person.

◆

Honey Imported from Puerto Rico.—In a pamphlet recently issued by the United States Department of Agriculture, on the "Trade of Puerto Rico"—our lately acquired possession—we find that in 1897 there was imported into the United States from there, 225 gallons of honey and 80 pounds of beeswax. Not a very sweet island, if that was all they had to export. But if it is anything like Cuba as a paradise for bee-keepers, in a few years we may expect the production of great honey crops in Puerto Rico.

◆

A Warning to Honey-Shippers.—For the benefit of the newer honey-producers we wish to say that about three years ago there were a number of fraudulent commission firms who handled honey. Some of them were actually in business for just what they could defraud bee-keepers out of, by sending out circular letters in which they over-quoted the market. Many bee-keepers were caught in the net, and some lost very heavily.

The scheme was to get in a lot of honey by offering a much higher price than the market warranted, then afterward claiming the price had dropt, and the bee-keeper would get just about what the crooked dealer felt like sending him.

Now, we hope that no honey-producers will fall into that trap this year. Be sure you know something about the firm you ship to. Don't take much risk, for what use is there in working to get a crop of honey, and then lose it through some scheming commission firm? Better a thousand times sell it for less nearer home, or *give* it to your neighbors and friends.

Right in line with this is the following paragraph taken from the Orange Judd Farmer—one of the best farm papers printed to-day:

> RESPONSIBLE COMMISSION MERCHANTS.—We again caution our people in the interior who ship to the city markets against consigning goods to irresponsible firms. A favorite trick of these concerns is to over-quote the market in sending out circular letters, in some instances pledging themselves to make returns at a little above the market, or perhaps claiming to have a special outlet for goods, thus enjoying better advantages than the average commission merchant. We have recently had called to our attention soliciting letters of this character, which have some of the outward appearance of frauds, and all such should be promptly ignored. Many of these shady people go just as far as the law will allow, taking advantage of innocent shippers who have scant recourse. Something more than a fair bank rating is necessary to insure satisfactory returns. Do not ship to strangers unless you have every reason to know they are all right.

◆

Are there Too Many Bee-Keepers?—Mr. C. P. Dadant has a very interesting article on page 577, showing that bee-keeping in this country is far from being overdone. In our recent trip to Ohio we think we saw only two or three small apiaries along the route of over 400 miles, tho we past hundreds of farm-houses all along the way.

We think we have encouraged very few people to go into bee-keeping. But what we have endeavored to do is, to get all who are already keeping bees, to take the American Bee Journal, and thus learn how to manage them more successfully. This surely is a legitimate effort, and so would be an attempt to induce more of those who are favorably situated to begin to keep bees and produce at least what honey their families could eat.

But everybody will never keep bees any more than everybody will grow strawberries or other fruit that requires more than ordinary care and intelligence to make a success of it.

Bee-keeping can never be overdone, especially in view of the ever-recurring failure of the honey crop to materialize. Of course, there will always be some part of the country that will produce a crop of honey, no matter if there be a total failure in almost every other place. And even when there is a good crop practically all over the country, honey need not be a drug on the market if properly distributed. There always will be plenty of people who will never learn the value of honey as a food, but who, once they learned it, would use it more and more.

◆

Attending Bee-Conventions Pays.—Mr. Harry S. Howe, one of the expert handlers of bees in the State of New York, in the American Bee-Keeper says this about the value of attending bee-conventions:

> "Take time to go to your bee-convention, even if you have to hire a man to work in your place while you are gone. I got an idea at the last Cortland county convention that has been worth all I ever paid for conventions, so far this season. Even if there are no new ideas, it is worth the price to get the 'bee-fever' up to a higher temperature."

There are but very few conventions of bee-keepers that are unprofitable to those who attend. And *we* have never gone to one that was not abundantly helpful to those present. Especially has this been true of the national meetings of bee-keepers. Of course, we hardly think it would pay to go from California to Maine just to attend a convention, but within any reasonable distance we feel it cannot fail to be exceedingly valuable. Why, just to meet and get acquainted with some of the grand men of the pursuit ought to be worth much to any one.

It was somewhat expensive for us to attend the national convention held in Toronto, Ont., in 1895, but we felt it paid us well, because there we met Father Langstroth (who in a month after died), G. M. Doolittle, J. B. Hall, S. T. Pettit, Wm. McEvoy, D. W. Heise, Wm. Couse, and others that we might name, whom it was an exceedingly great pleasure to see, especially as it was the first time we had met them.

And then the World's Fair convention, where we met for the first time Prof. Cook, G. W. Demaree, Chas. F. Muth, E. S. Lovesy, Mrs. L Harrison, Mrs. J. N. Heater, Mrs. J. M. Null, Mrs. Sherman, Rev. E. T. Abbott, and hosts of others equally pleasant to meet. Did it pay us? Did it pay *you*, reader, if you were there? Of course it did.

◆

Southern California is kept track of pretty well by Prof. Cook, who quite regularly reports as to the apiarian conditions in that region. Writing us Aug. 31, he reported as follows:

> While in most sections of Southern California the drouth remains unbroken, up in the mountains of parts of San Bernardino county there have been heavy rains, so that the railroads have been washt away. The Indians say this promises a wet winter. It is to be hoped that the Indian knows. At least these rains help to wet the earth, and give promise of a harvest in 1899.
>
> In passing apiaries of late, I find already many empty hives. Unwisdom permitted too free extracting last season. The extreme drouth this year, and consequent honey famine has brought on starvation. Deserted hives will attract moths, and general starvation is threatened. It would seem the wise thing in such countries—and all countries are uncertain—to have a generous supply in the hive each season—enough to bridge over one year of famine, at least; and also wise in case this precaution was neglected, to find enough to prevent starvation. Our own good, no less than the good of the cause, demands such action.
>
> The extreme drouth this year in Southern California has paralyzed bean-production, so that source for honey is wanting. The alfalfa fields, and a very limited area of more abundant rainfall, are the only bright spots in the apicultural sky of 1898. A. J. Cook.

◆

Summer Honey-Drinks.—Dr. Miller, in Gleanings for Sept. 1, says British B. Mann sent him the following summer drinks:

> Honeyed Buttermilk.—One spoonful of honey to ¾ glass of buttermilk. Stir well, then add as much soda as will lie on a dime.
>
> Honey Pick-me-up.—One egg well beaten in a pint of cold milk, with one tablespoonful of honey added.

We should think that either of these "honeyed-pick-me-buttermilk-ups" would be good. We'll have to try them the next time we "take a drink."

◆

The Past Season's Experiences in the apiary are quite fit subjects for discussion in the columns of the Bee Journal. You are invited to tell about them, and what you have learned in connection with them. Perhaps many of you never wrote a line for publication. But that won't make any difference at all. Just write us about your work as you would in a private letter, and we will attend to putting it in proper shape for printing.

◆

A Correction.—In the second paragraph from the bottom of the second column on page 549, and in the first line, it should read "*none*" instead of "more," where it says: "In regard to pollen in sections, let me say *none* will appear," etc. We regret the error, as it conveyed an entirely different idea than was intended by Mr. Hartzell, who so greatly appreciates Mr. Golden's method of producing comb honey.

THE WEEKLY BUDGET

W. S. Yeaton, of Woodbury Co., Iowa, writing Sept. 3, said: "Bees are booming on golden-rod."

Frank Ruffner, of Shelby Co., Ill., wrote us Sept. 5: "We are having quite a fall flow of honey."

The Proprietor of what is believed to be the oldest apiary in Alameda county, Calif., writes us that he has taken 80 pounds of extracted honey from each of his colonies this season. This is the average; some colonies yielded 120 pounds.

Senor T. Estrada de Palma, of the Cuban junta, it is said, has received, during his day of peaceful residence in his native land, in one year from bee-hunters $800 for the privilege of removing the honey and beeswax from his estate in Santiago province.—American Bee-Keeper.

Mr. Thos. Wm. Cowan, editor of the British Bee Journal, writing us Aug. 16, reported that Mrs. Cowan was then with their two daughters in Scotland, and that he had returned from Switzerland a couple of days before where he had met the leading bee-keepers.

Mr. G. M. Doolittle, of Onondaga Co., N. Y., writing us Sept. 3, said:

"It is awfully hot here, and has been for four days; but I am driven to work from 5 a.m. to 9:30 p.m., out in the hot sun the larger part of the time."

Mr. Thomas Evans, a bee-keeper of Lansing, Iowa, died Aug. 12, 1898, after a lingering illness of many months, at the age of 52 years. He claimed to be the inventor of a new process of sheeting wax for making comb foundation, which we think is used by some of the smaller comb foundation makers.

Mr. H. D. Cutting, of Clinton, Mich., an ex-president of the United States Bee-Keepers' Union, and for years one of the corps of experts who answer questions in our "Question-Box" department, still continues to suffer from almost total blindness. We were hoping that he would recover ere this. He will have the sincere sympathy of his many old-time bee-keeping friends in his sore affliction.

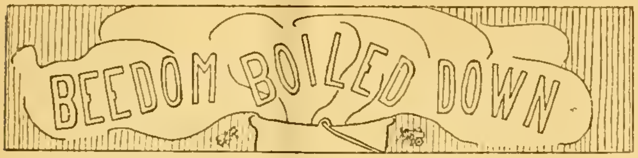
Mr. C. M. Martenson, the business manager of the well-known firm of G. B. Lewis Co., bee-supply manufacturers, called on us last week, when in Chicago. Mr. M. reports a busy year—the like of which he doesn't care soon to pass through again. You see, he doesn't want to leave this world just yet. His firm expects to make up a large amount of stock before next season, so as to be prepared for any emergency.

Mr. J. H. Martin is about to get a bicycle and travel over California awheel, so as to get a store of material for his Rambles. He hopes, by this means, to make more side-trips than he was able to do when using a team. He expects to purchase a "Cleveland" wheel; wouldn't a "Rambler" make be more appropriate for the Rambler? The "Rambler" folks could not do better then to send one of their wheels to the well-known correspondent, for it would be a big advertisement for them.

Mr. E. Tipper, editor of the Australian Bee-Bulletin, writing us July 18, said:

"We are having what we may call a nice winter—a fair amount of rain, with bright, sunny days between. On the ridges above my apiary the white box-trees are laden with bloom, but the days are too short, and the weather too cold (it is our winter here) for the bees to gather much. The yellow box is also well in bud. We had a good convention in Sydney, the beginning of this month. It was a gathering of practical bee-keepers, and good practical work was done."

When we received Mr. Tipper's letter (Sept. 3), we were having our hottest days of summer—90° above zero. And in Australia it was winter.



Does His Full Share.—"The editor of the American Bee Journal does his full share to help the honey market. I've just had the pleasure of a two-days' visit from him, and I think he ate honey at every meal."—Dr. Miller, in Gleanings.

* * *

Tall Plain Sections are reported a success by C. E. Hammond, in Gleanings. Wherever the bees workt on them at all, they finisht the greater part of those they began on, instead of beginning on all and finishing none as they had generally done with the ordinary 4¼ sections in T supers without separators.

* * *

Are Separators Needed?—Dr. S. H. Hurst says in Gleanings, "He who produces honey without a separator of some kind is just a little too slow to keep abreast of the times." Per contra, Editor Hill says he had no idea that the majority of bee-keepers used separators, never used them himself except 400 or 500 as an experiment, and doubts their advantage.

* * *

Naphthalin in Place of Sulphur has been used for some years by Ulr. Gubler, and he finds it just as effective against the bee-moth, and less objected to by the bees. Powder the combs with naphthalin, or else put small pieces in the closets where combs are kept, renewing when evaporated.—Revue Internationale.

* * *

Why are Hybrids in the Majority?—Gleanings thinks "the majority of progressive bee-keepers use hybrids, because they secure as much honey as Italians, and more than blacks." American Bee-Keeper thinks that is not the true reason why hybrids are in the majority, but does not say what the true reason is. Don't they have hybrids just because it is too much trouble to keep pure Italians?

* * *

Width of Bottom Starters.—The editor of Gleanings says he has had trouble with bottom starters toppling over when as wide as half an inch. Dr. Miller says when too narrow the bees seem inclined to gnaw them down. He uses them deeper than half an inch, but has the top starter come within less than ¼ inch of the lower. Then the bees tack the two starters together before they have time to topple over.

* * *

Bees and Horses.—Edwin Wide reports in the British Bee Journal that he had a meadow mowed without having a horse stung, the nigh horse going within a yard of the entrances of 17 colonies. Prior to the horses being taken to work, he made a solution of carbolic acid and water, and, with a cloth dipt in the solution and then wrung out, carefully wiped the horses all over their bodies and limbs.

* * *

Swarms Deserting.—D. W. Heise complains in Canadian Bee Journal that nearly 50 percent of his swarms, after having been hived in new, well-made hives, with new frames and full sheets of foundation, deserted, some the second, third, and even the fourth day. Hives were well shaded. He wants some one to tell him what was the trouble. The editor says desertion has given much trouble to every one this season.

* * *

Cutting Queen-Cells to Prevent Swarming.—The practice of cutting queen-cells to prevent prime swarms, Doolittle says in American Bee-Keeper he believes often results in loss of honey, throwing the bees out of balance and making them swarm right in the harvest. For after-swarms, the usual plan of cutting cells six days after the prime swarm may only make matters worse. Makes after-swarms later, but that's all. Wait till eight days after the prime swarm, then cut all cells and give a choice cell, and you have a sure thing. His favorite plan is to listen the evening of the 8th day for piping, and if no piping is heard, to listen each night till the 16th, after which there will be no swarming. When piping is heard, he cuts out all cells the next morning, knowing for sure that there is a free queen in the hive.

* * *

Size of Worker-Cells.—In France some attempt to rear larger bees has been made, and partly at least through using foundation with cells of larger size than natural. M. Sergent, writing in L'Apiculteur, says if the size of cells controls the size of bees, his bees should all be of the same size, as he has used the same foundation for all. But he finds his Cyprians and Carniolans perceptibly smaller to the eye than the blacks.

* * *

Plain Sections Without Separators.—A conspiracy is being hatcht in Canadian and American Bee Journals and American Bee-Keeper, to make bee-keepers crazy guessing. C. A. Bunch, supported by D. W. Heise, and Editor Hill, darkly hints at a plan for having plain sections bee-space apart with no separators. In the interest of common humanity, let Mr. Bunch tell us how he manages to keep plain sections spaced apart.

* * *

Swarms Losing Weight in Transit.—Trouble has been reported in the British Bee Journal between sellers and buyers, the buyer complaining that the colony sent by rail was not up to the agreed weight. The trouble comes from the fact that the journey by rail, with its accompanying jolting and excitement, causes a loss in weight. Even without any journey there is a serious loss in weight. One man reports that a swarm hived at noon lost 5 ounces in 10½ hours, and 14 ounces in the first 24 hours. Another swarm sent by rail lost 27 ounces from one day to the next.

* * *

Peanut Queen-Cells.—Those big peanut queen-cells on a stick, *a la* Doolittle, give larger and better queens, according to our Mr. Wardell, than by the old method. I supposed this was true, but there is some satisfaction in having it proved before our eyes. I have just received a line from Mr. Alley, inquiring why we fuss with artificial Doolittle cups when the natural ones can be reared more cheaply by the bees, as per directions in his book. But there is one great advantage in artificial cups; viz., they stiffen the base of the cells so that one can mash them right into the side of a comb, without crushing the cell itself. The natural cell-cups are frail things, and require to be handled like eggs.—Gleanings.

* * *

Why Frame Hives are Better is a topic handled by G. M. Doolittle in the Canadian Bee Journal. With movable frames we can lift out the frames and actually see how much honey is present in spring, and if needed an extra frame of honey can be given, whereas only a guess can be made at the honey in a box-hive, and if too cold for the bees to work on a feeder there is no help for them in case of scarcity.

If a colony is overstockt with honey, the queen being thereby crowded, an empty frame can be given for a full one.

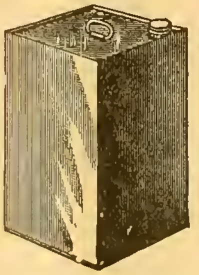
Whether a queen is doing good work can be seen by actual inspection with movable frames, and if the queen is poor the matter can be remedied.

Drone-comb can be removed and worker put in its place.

The frames can be manipulated so as to hasten the development of the colony, thus getting them ready sooner for the harvest.

If some colonies are extra strong and others weak, bees and brood can be taken from the strong and given to the weak. That's much easier than to drum bees out of a box-hive.

BEST
EXTRACTED HONEY FOR SALE
ALL IN 60-POUND TIN CANS.



ALFALFA HONEY

This is the famous white extracted honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

BASSWOOD HONEY

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is greatly preferred by those who like a distinct flavor in their honey.

PRICES OF EITHER ALFALFA OR BASSWOOD HONEY:
A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—One 60-pound can, 7½ cents a pound; 2 cans, 7¼ cents per pound; 4 or more cans, 7 cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. This honey is all

Absolutely Pure Bees' Honey.....
the finest of their kinds produced in this country.

☞ We would suggest that those bee-keepers who did not produce any honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. The pamphlet, "HONEY AS FOOD," will be a great help in creating customers for honey. See prices on another page.

GEORGE W. YORK & CO., - 118 Michigan St., CHICAGO, ILL.

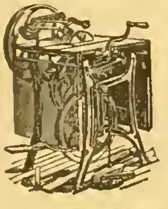
Be It Known

To all Men, we are prepared to fill orders promptly for
CHOICE QUEENS of the best strains of
Golden or Leather-Colored Italians....

Tested $1 00; Untested—one. 75c; three, $1.50. After July 1, 50c each. Remit by Express Money Order. payable at Barnum. Wis. One and two-cent stamps taken. Address,

Van Allen & Williams,
25Atf BARNUM, WIS.
Please mention Bee Journal when writing.

Bee-Hives, Sections, Shipping-Cases—everything used by bee-keepers. Orders filled promptly. Send for catalog MINNESOTA BEE-KEEPERS' SUPPLY MFG. CO., Nicollet Island, Minneapolis, Minn.



ONE MAN WITH THE
UNION COMBINATION SAW
Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery
Sold on Trial. Catalogue Free.
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46 Water St SENECA FALLS. N. Y
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COMB FOUNDATION Wholesale and Retail.
Working Wax into Foundation for CASH A Specialty.
Hives, Sections, and a full line of Supplies. The best of everything. Write for Catalog, with prices, and samples of Foundation and Sections.
BEESWAX always wanted for cash or trade.
GUS DITTMER,
AUGUSTA, WIS.
Please mention Bee Journal when writing.

GENERAL ITEMS

Bees Doing Well.

Bees throughout the section of Virginia and Pennsylvania traverst by the Second Division of the Second Army Corps, seem to be doing well. The honey, however, is inferior to that gathered in Vanderburgh Co., Indiana. My wife reports our bees there as very strong, and is putting on second supers. The best flow is just about to set in from smartweed and fall flowers in the river bottoms, which yield a good crop of water-white honey every season without fail, up till frost sets in.

Our present camp on the banks of the Susquehanna is a most beautiful spot.

SERGT. J. C. WALLENMEYER,
Company 8, 159th Ind. Vol.
Camp Meade, Pa., Sept. 6.

◆

Honey Superior in Quality.

While we did not get any honey last spring, and don't look for much of a crop this fall, what has been secured is of a superior quality.

I favor Editor York's views about buying direct from one another, so we can supply the demand on our producers, and thereby help keep up a stipulated price on our crop; and if necessary let Virginia go to Cuba or Puerto Rico—anywhere we can get honey to fill our orders with, so that it is a pure article. Of course, I would prefer

California ❋

If you care to know of its Fruits, Flowers Climate or Resources, send for a Sample Copy of California's Favorite Paper—
The Pacific Rural Press
The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated $2.00 per annum. Sample Copy Free.
PACIFIC RURAL PRESS,
330 Market St., - SAN FRANCISCO. CAL.

QUEENS.
Now is the time to re-queen, and the place to get them is from DANIEL WURTH. He furnishes good Queens by return mail for 45 cents each; 6 for $2 70; or $5 00 per dozen.
DANIEL WURTH,
36A4t Falmouth. Rush Co., Ind.
Please mention Bee Journal when writing.

SEND Your Address... on postal card for a free copy of my book on Queen-Rearing.
HENRY ALLEY, Wenham, Mass.
36Atf Please mention the Bee Journal.

Nickel Plate Excursion to Boston.
Tickets on sale for trains leaving Chicago Sept. 16 to 18, inclusive, at rate of $19.00 for the round-trip, and good returning until Sept. 30. Also cheap rates to all points East. Vestibuled sleeping-cars to Boston, and solid train to New York. Rates lower than via other lines. For further information call on or address, J. Y. Calahan, General Agent, 111 Adams Street, Chicago. Telephone Main 3389. (60-32-6)

Sweet Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order·

	5lb	10lb	25lb	50lb
Sweet Clover	.60	$1.00	$2.25	$4.00
Alsike Clover	.70	1.25	3.00	5.75
White Clover	.80	1.40	3.00	5.00
Alfalfa Clover	.60	1.00	2.25	4.00
Crimson Clover	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, wanted by freight.
Your orders are solicited.

GEORGE W. YORK & CO.,
118 Michigan Street, - CHICAGO, ILL.

Queens, Bees and Bee-Keepers' Supplies

Tested Queens in April and May, $1.00. Untested, 75c. Choice Breeders, either three or five-banded Italians, at $2.00. Choice Imported Breeders, $5.00. Satisfaction guaranteed. Send for Price-List to

F. A. CROWELL,
8Atf GRANGER, MINN.
Please mention Bee Journal when writing.

WATCH POUDER'S AD

SEE THAT WINK!

Bee-Supplies! ROOT'S GOODS at Root's Prices.

Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Cat. free. **Walter S. Pouder,**
512 Mass. Ave.,
INDIANAPOLIS, INDIANA.
Please mention Bee Journal when writing.

The A. I. Root Co.'s Goods **Wholesale. Retail.**

Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**
Cash for Beeswax. BELL BRANCH, MICH.
Please mention Bee Journal when writing.

THE PLACE
TO GET YOUR
QUEENS
Is of H. G. QUIRIN, of Bellevue, Ohio.

Ten years' experience with the best of methods and breeders enables him to furnish the best of Queens—Golden Italian—Doolittle's strain—warranted purely mated, 50c; 6 for $2 75. Leather Colored same price. Safe arrival. No postage stamps wanted. 23A16t
Please mention Bee Journal when writing.

Muth's HONEY-EXTRACTOR Square Glass Jars.

Root's Goods at Root's Prices.

BEE-KEEPERS' SUPPLIES in general, etc etc, Send for our new catalog.
Practical Hints" will be mailed for 10c. in stamps. Apply to—
Chas. F. Muth & Son, Cincinnati, Ohio.
Please mention Bee Journal when writing.

Meeting of Sovereign Grand Lodge, I.O.O.F., Boston, Mass., Sept. 19 to 24, Inclusive.

For this occasion the Nickel Plate Road will sell tickets at rate of one fare for the round-trip. Tickets on sale Sept. 16 to 18, inclusive, good returning until Sept. 30, inclusive. For particulars, address J. Y. Calahan, General Agent, 111 Adams Street, Chicago, Ill. Telephone Main 3389. (59-32-6)

Virginia to stay at home, as we have a large territory here to develop in apiculture, the majority of bees being kept in box-hives, and the people want to know if there is but one king in a hive!

I am for bees and honey, first, last, and always. PARK T. SOUTHARD.

Woodruff Co., Ark., Sept. 5.

Great Find of Bee-Trees.

My bees are doing finely. From three colonies I increast to nine, but saved only seven, and found six bee-trees. One I cut July 25, and took out 105 pounds of honey. From the others I got from 30 to 150 pounds. My partner found 40 trees. He cut one last week and got 685 pounds. It was a small ash tree. We went with a little tin bucket, but as we sawed in we could feel the saw strike honey. When the tree fell over, the honey extended away down into the root of the tree, all of which we took out, and then we started at the tree. We had to go for more buckets, as the combs ran away up into the tree. I split it open and we took out 16 feet of honey, nice and white. We started to saw at 6 o'clock, and we were through with the job the next morning at 6:30. It was hard work. At first we thought the tree was no good, but it paid to cut it. These were black bees. I took them home, and they are doing finely.

I have 11 colonies in good condition. Wild and tame buckwheat is in bloom now.

B. F. SCHMIDT.

Clayton Co., Iowa, Sept. 5.

For Business Reasons.

The United States Department of Labor has just issued a bulletin entitled "The Economic Aspects of the Liquor Problem." in which a few points are worthy of notice. The first is the change that has occurred in the consumption of liquor. In 1840 the per capita consumption of distilled spirits was 2.52 gallons. In 1896 it was one gallon, or about two-fifths of what it was 55 years ago. But this does not represent the actual decrease in the consumption of spirits as a beverage. In both cases this quantity includes the amount used in arts, manufactures, medicines, etc., which must have been vastly greater in 1896 than it was in 1840; so that our people use less than two-fifths as much spirituous liquor as their fathers and grandfathers did. Certainly our elderly readers, who remember the time when no harvest or threshing or barn-raising was without a liberal supply of liquor, will sustain this assertion.

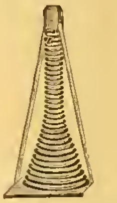
But there is another side to this consumption of intoxicants. While the use of spirituous liquors has decreast, and of vinous liquors has changed little, that of malt liquors has grown at a wonderful rate. In 1840 Americans consumed but 1.36 gallons of malt liquors per capita, while in 1896 they consumed 15.16 gallons. This shows that the tendency has been toward the milder beverages as well as toward the restriction of the use of stimulants.

But probably the most interesting point in the investigation is that which shows how employers regard the use of liquor by their employes. To questions askt by the Com-

DR. PEIRO,

CENTRAL MUSIC HALL, CHICAGO.

Please mention Bee Journal when writing.



Queen-Clipping Device Free

The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

Geo. W. York & Co., 118 Mich. St., Chicago, Ill.

OUR PRICES are worth looking at. We are making the new

Champion Chaff-Hive

with dovetailed body and supers, and a full line of other Supplies, and we are selling them CHEAP. A postal sent for a price-list may save you $$$$
R. H. SCHMIDT & CO.,
Box 187 SHEBOYGAN, WIS.
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BEE-KEEPERS! Let me send you my 64-page Catalog for 1898
J. M. Jenkins, Wetumpka, Ala.

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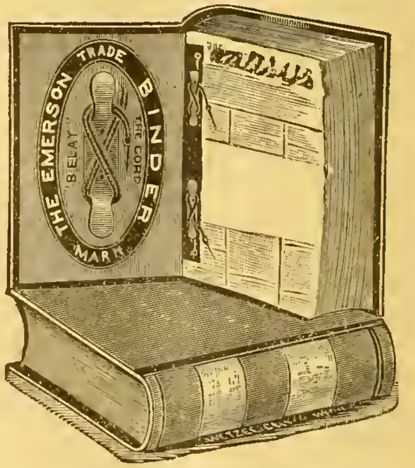

This Emerson stiff-cloth-board Binder for the American Bee Journal we mail for 60 cents; or will send it with the Journal for one year—both for $1.50. It is a very fine thing to preserve the copies of the Bee Journal as fast as they are received. If you have the "Emerson," no further binding is necessary.

GEORGE W. YORK & CO.,
118 Michigan Street, - CHICAGO, ILL.

☛ IF YOU WANT THE
BEE-BOOK
That covers the whole Apicultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keeper's Guide.

Liberal Discounts to the Trade.

BEES! Florida Italian QUEENS!

Tested Queens, $1.00 each; Untested, 50c. Prompt and satisfactory dealing.
Address, **E. L. CARRINGTON,**
11Atf De Funiak Springs, Fla.
Please mention Bee Journal when writing.

missioner of Labor as to their position regarding the use of liquor by employes, 6,901 establishments replied, representing 1,745,000 men. Of these 5,363 reported that when hiring men they endeavor to ascertain whether the prospective employes use liquor. Of establishments engaged in the business of transportation nearly all take such precautions.

Of the 6,901 establishments mentioned 3,527 absolutely require that their employes shall not use liquor when on duty, and most of them require that employes shall not use it at any time. The reasons given for this are instructive. Unreliability, inefficiency, incompetency, bad work, irregularity, dishonesty, accidents, abuse of animals, wastefulness, and bad example are some of the reasons given for not employing men who use liquor. Sober employes mean the opposite of all these things, and that is why business men want them.

Bear in mind that these figures are not compiled by a "temperance crank," and that cranks did not furnish the reports from which they were taken. They are merely the result of an investigation made for business reasons among business men, and there is no sentiment about them except that of common-sense.—Nat. Stockman.

Bees Didn't Do Well.

I am well pleased with the American Bee Journal. I always read it through once, and some of it twice. I think if there ever was another man with as much patience as Job it surely is Dr. Miller.

My 30 colonies have not done very well this season—only about 350 pounds of surplus, all sold and delivered at 12½ and 10 cents a pound.

White clover was a total failure so far as nectar was concerned, and there was but a small amount of linden. TENN.

Cannon Co., Sept. 6.

Afflicted With Honey-Dew.

I commenced the season of 1898 with 28 colonies, all black bees. I use a hive with Langstroth size frames. I increast to 36 colonies by natural swarming, and had 1,400 one-pound sections filled, but the honey was mostly dark on account of so much honey-dew. There was a wonderful amount of it during the month of June, and just as the basswood began to bloom it started to rain, and hasn't quit yet, so we got but little basswood honey. Consequently honey is very cheap on account of its dark color. In July I took a case of honey to a little railroad town some nine miles distant, and askt 14 cents a section, and the merchant said they had been offered all the honey they would want for 10 cents a pound by one of my neighbors living some 2½ miles from me.

A few days later my wife and self went to see this neighbor and his honey. I found him in the field at work. After shaking hands I inquired about his crop of honey. He said, "Oh, I have lots of it, or I reckon I have. I haint took any yet." It was then the 16th of August. He went on to say that his honey was the very best of honey, as it was all gathered from honey-dew. I told him what I had read about this stuff, and he hooted at the idea, and contended that it formed and fell just like rain.

Before leaving, I askt to look in some of his hives, so we opened five or six, and with but one exception we found a great ant-nest on top of the sections, or frames, as a part of his hives contain shallow frames in the upper story; and the honey was as black as if it had been used for brood-rearing. He is also one of those "king bee" men; doesn't read any text-book or bee paper, or anything of the sort, but knows all about bees!

I marketed a part of my honey a few days ago in the towns of Beverly and Elkins, in our own county (Randolph), at 12½ cents, partly in goods.

West Virginia, Sept. 5. IRA SHOCKEY.

Bees Have Foul Brood.

I am well pleased with the American Bee Journal; it has been a great help to me. This is my third year with bees. The first year I got no surplus honey from two colonies. Last year, from four, I got 75 pounds; this year I had six, and from the instruction received from the Bee Journal I learnt that they had foul brood, so I transferred them into new hives on full sheets of foundation, and united, making three colonies, and burnt the old hives and brood. Foul brood is quite bad in this part of the county. Quite a number of colonies have been burned.

Some bee-keepers tell me they don't need a bee-paper. One bee-keeper living half a mile from me has three colonies and got no surplus honey. I have the same number and got 150 pounds of section honey, thanks to the American Bee Journal.

JOHN F JOHNSON.

Schoharie Co., N. Y., Sept. 5.

Where Noah Kept His Bees.

Dr. James K. Hosmer, while recently visiting Boston, had occasion to visit the new Public Library. As he went up the steps he met Edward Everett Hale, who askt the Doctor's errand.

"To consult the archives," was the reply.

"By the way, Hosmer," said Dr. Hale, "do you know where Noah kept his bees?"

"No," answered Hosmer.

"In the ark hives," said the venerable preacher, as he past out of ear-shot. —Ladies' Home Journal.

The Clover Housewives.

BY PERCIA V. WHITE.

The merry wives in Cloverland
  Are flying round in glee,
For they've received a message from
  That gay brigand, the Bee.

"Now load your three-leaved tables down
  With sweets in colors three,
For I'm very fond of honey!" quoth
  That gay brigand, the Bee.

"And I will find the pollen-boards
  Of the Miser of Cloverlea,
And fling his gold among you!" cried
  That gay brigand, the Bee.

So they're loading down their tables small
  With sweets in colors three—
In red and white and gold—to please
  That gay brigand, the Bee.

—Youth's Companion.

HONEY ❊❊❊

If you want Colorado Alfalfa, Sweet Clover and Cleome honey—comb or extracted—correspond with the Secretary of the Colorado State Bee-Keepers' Association. Our Honey ranks high in quality. Car lots a specialty.

Address **F. RAUCHFUSS, Elyria, Colo.**

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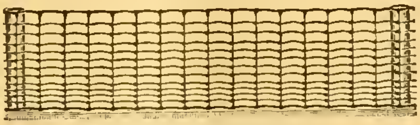
BEES, HONEY, MONEY

Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

J. P. H. BROWN, Augusta, Ga.

Please mention Bee Journal when writing.



IN PEACE

as in war, and in the hearts of its countrymen, stands **first** our coiled spring fence—**a twelve-years-old hero.** Send for autobiography.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Please mention Bee Journal when writing.

HORSE-HIGH

Laying aside all speculation these remain as the requisites of a perfect fence. Our Duplex Automatic Machine makes just such a fence in 100 styles at the rate of sixty rods per day, at a cost for wire of only

BULL-STRONG

18c. for a good farm fence; 19c. for poultry fence; 16c. for a rabbit-proof fence and 12c. for a good hog fence. We will sell you plain, coiled spring or barb wire direct at wholesale prices. Get our catalogue before buying.

Kitselman Bros., Box 138, Ridgeville, Ind.

PIG-TIGHT

45Dtf Please mention the Bee Journal.

SPECIAL OFFER ❊❊❊

For the next 90 days we will sell warranted purely mated **ITALIAN QUEENS** at 50 cts. each; half dozen $2.50; tested, 60 cts. each; half dozen, $3.00. Safe arrival guaranteed. Fifteen years' experience in queen-rearing.

LEININGER BROS, Fort Jennings, Ohio.

Please mention the Bee Journal. 33Dtf

PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

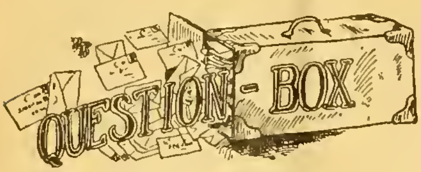
Being the cleanest is usually worked the quickest of any Foundation made

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y.

Please mention Bee Journal when writing.

Don't Forget

the excursion to Boston over the Nickel Plate Road, Sept. 16 to 18, inclusive, at rate of $19.00 for the round trip. Good returning until Sept. 30, 1898, inclusive. Tel. Main 3389. (61-32-6)



In the multitude of counsellors there is safety.—Prov. 11-14.

Snow at Hive-Entrances.

Query 82.—Is it advisable after a heavy snow-storm to clean all the snow away from the entrance of the hive, or would you let it remain?—Mich.

E. France—We let it remain.

W. G. Larrabee—Let it remain.

Mrs. L. Harrison—Let it remain.

R. C. Aikin—If much, clear it away.

Prof. A. J. Cook—I would clear it away.

Dr. C. C. Miller—Sometimes, and sometimes not.

R. L. Taylor—Clean it away if it gets soft and heavy.

Chas. Dadant & Son—Let it remain till it begins to thaw.

James A. Stone—It does not snow on my bees, as they are in the cellar in winter.

P. H. Elwood—The most successful winterers say that the entrances should be kept open.

Rev. M. Mahin—Whenever there is snow enough to cover the entrance, I remove it as soon as I can.

Eugene Secor—The snow will do no harm unless ice is formed at the entrance, obstructing ventilation.

O. O. Poppleton—If dry, I should let it alone; but if not, and liable to be frozen solid, I should take it away.

Emerson T. Abbott—Let the snow alone. It will do no hurt, and you may do a deal of harm trying to remove it.

Dr. J. P. H. Brown—Without having much experience on the "snow question," I would venture to clean it away.

J. M. Hambaugh—Leave it alone during extreme cold weather. When it begins to thaw, remove it from the entrance.

J. E. Pond—In my own apiary I let the snow remain. In other localities it might be advisable to clear it away. The question, it seems to me, is local and not general.

C. H. Dibbern—I would not winter bees where snow would cover them up at all. If I did, I think I should not disturb them by shoveling the snow from about them.

Mrs. J. M. Null—As long as light and porous in its nature let it remain at the entrance. If in danger of solidifying, remove. Ice in front of the entrance is anything but desirable.

Dr. A. B. Mason—If the hive were properly tipt forward I would let the snow remain unless a crust should form on the snow. I would then break the crust and let the snow remain.

D. W. Heise—It depends very much whether the snow drifts solid or loosely; if packt hard, and to any extent of depth, past experience teaches me that it is advisable to remove it instanter.

J. A. Green—I would let the snow remain unless the weather was such that by thawing and freezing the entrance was apt to get clogged with ice. I would clear away the snow if the weather was so warm that the bees wanted to fly. At other times I would let it remain.

S. T. Pettit—If there is a porch or board leaned up against the hive, or other contrivance to keep the ventilation clear, let the snow alone; otherwise it is generally better to clear it away.

E. S. Lovesy—We let it remain; if the bees attempt to come out, and they meet the snow at the entrance, they will return, but if the snow is swept away they will often fly out and fall and die in the snow.

G. M. Doolittle—Leave a wide board in front of the entrance, and pay no attention to snow unless it covers the hive. I think it best not to have hives covered entirely with snow for many days at a time.

G. W. Demaree—Situated as far South as I am I could give you no advice of value on this subject. There were some bees lost in this locality some years ago by wet snow and sleet closing all ventilation to the hives.

* * *

Minnesota.—The adjourned meeting of the Minnesota Bee-Keepers' Association will be held on Wednesday forenoon during State Fair week, at the place where the honey exhibit is made on the fair grounds. Make an effort to be there, and invite other bee-keepers who are not members to come and join the Association.
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The Nickel Plate Road will sell excursion tickets from Chicago to Boston and return for trains of Sept. 16, 17 and 18, at rate of $19.00 for the round trip. Tickets will be valid returning until Sept. 30, inclusive. On account of heavy travel at this particular time, those desiring sleeping-car accommodations should apply early to J. Y. Calahan, General Agent, 111 Adams St., Chicago. Telephone Main 3389. (58-32-6)

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I would have no difficulty whatever in getting twice 1,000 new subscribers this year, if all of the bee-keepers in this country had read the Review the past year. I have sometimes thought that it might pay a publisher to give away his journal one year, simply for the sake of getting it into new hands. There are, of course, decided objections to such a course; but I am going to come as near to it as I dare. Here is my offer:

If you are not a subscriber to the Review, send me $1.00, and I will send you twelve back numbers, the Review the rest of this year and all of next year.

Each issue of the Review, especially if devoted to the discussion of some special topic, is really a pamphlet containing the best thoughts and experience of the best men upon the topic under discussion. Twelve back numbers of the Review are, to a certain extent, so many little books devoted to as many different phases of bee-keeping. Some issues of the Review are now out of print; of others only a few are left; while of others there are several hundred. Of course, I shall send those of which I have the most, but no two alike.

Most people subscribe for a journal at the beginning of the year. In this case there is no use of waiting, as you will get the Review for next year just the same as tho you waited until next January to subscribe, and you get all the rest of the numbers for this year FREE. The sooner you subscribe, the more free issues will you receive.

Let me tell it over once more. For $1.00 you get twelve back numbers, the Review the rest of this year, and for all of 1899.

31Dtf W. Z. HUTCHINSON, Flint, Mich.

The Bee-Keeper's Guide

This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published today. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."

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☞ See Honey Offer on page 587.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Sept. 10.—Honey has sold well for past few days, and all of the best white comb that is in proper shape sells at 12c. Off grades of white, 10 to 11c; amber, 9 to 10c; dark grades, 7 to 8c. Extracted, white, 5 to 7c; amber, 5 to 6c; and dark, 4½ to 5c. Beeswax, 27c. R. A. BURNETT & CO.

St. Louis, Sept. 9.—Fancy white comb, 12 to 12½c.; A No. 1 white, 10 to 11c; No. 1 white, 9 to 10c.; dark and partially filled from 5 to 8c, as to quality. Extracted in cases, No. 1 white, 6 to 6½c; No. 2, 5½c; amber, 5c; in barrels, No. 1 white, 5½c; amber, 4½ to 5c; dark, 4 to 4½c. Choice Beeswax, prime, 24c; choice, 24½c. At present there is a good demand for honey. WESTCOTT COM. CO.

Kansas City, Sept. 9.—Fancy white comb, 12@13c; No. 1, 11@12c; amber, 10@11c. Extracted, white, 5½@6c; amber, 5@5½c; dark, 4½@5c. Beeswax, 22@25c.

The receipts of comb honey are larger. C. C. CLEMONS & CO.

Columbus, O., Aug. 30.—The present demand for honey is rather limited, owing to the large quantity of cheap peaches now arriving. It is also a little early for this market to take a large amount. Receipts are ample but little now arriving that can be called fancy. The greater part of it will grade No. 1 and No. 2. We quote: Fancy, 14 to 15c; No. 1, 12 to 13c; No. 2, 10 to 11c. COLUMBUS COM. AND STORAGE CO.

New York, Sept. 1.—We have a good demand for new crop comb honey, and it is beginning to arrive. Have sold some shipments at 14 to 15c for fancy white, 12 to 13c for No. 1 white, and 10 to 11c for fair white. We think these will be about the ruling prices this fall; exceptional fine lots may sell at a little more. Extracted is in good demand at unchanged prices. Beeswax dull at 26 to 27c. HILDRETH BROS. & SEGELKEN.

Boston, Sept. 1.—Fancy in cartons, 13c; A No. 1, 11@12c; No. 1, 10@11c; No. 2, 9c.

New comb honey is now coming in, and while the demand is light owing to the warm weather, yet it is being well taken. Extracted, very little California on hand, and selling readily at 6½@7½c. Florida now arriving and selling at 5@6c. White clover scarce and wanted. BLAKE, SCOTT & LEE.

Indianapolis, Sept. 1.—Fancy white comb honey, 12@12½c; No 1, 10@11c. Extracted, white, 6@7c. Beeswax, 25@27c.

Only a few arrivals of fancy white comb; market almost bare, and demand good. Quite a little comb honey from honey-dew is being offered, but there is simply no demand for the stuff. WALTER S. POUDER.

Milwaukee, Sept. 1.—Fancy comb, 11 to 12c; A No. 1, 10 to 11c; No. 1, 9 to 10c; amber, 7 to 8c; old and dark, 5 to 6c. Extracted, white, in barrels or kegs, 5 to 6c; dark, 4 to 5c. Beeswax, 25 to 26c.

The market for honey is in very good condition; while there is yet a little of the old crop on hand, it is in very good order, and some demand, which will clear off everything before the new crop will arrive, very plentifully. There is already some receipts of new, but mostly extracted, and some very good quality, yet we fear the danger is in extracting too early, before the honey is fairly ripened. We anticipate a good demand a little later, and think values will remain about the same as present quotations. A. V. BISHOP & CO.

Buffalo, Sept. 1.—Fruit prevents a large demand for any kind of honey at present. A few cases of fancy one-pound new comb can be sold daily at 11@12c.; but any grade below must be urged at proportionately lower prices. Would advise writing us before shipping here. There is no demand yet for extracted. BATTERSON & CO.

San Francisco, Aug. 24.—White comb, 9 to 10c; amber, 7 to 8½c. Extracted, white, 6@6½c.; light amber, 5½ to 6c. Beeswax, 24@26c

Stocks are of very moderate volume, both of comb and extracted, and market remains firm at ruling rates, especially for water white or light amber of desirable flavor. There is a fair local demand and some business on foreign account. The bark J. O. Glade, clearing Monday for Europe, took 808 cases, valued at $3,250.

Cleveland, Sept. 1.—Fancy white, 13@14c; No. 1, white, 12@12½c; light amber, 11c; buckwheat, 9c. Extracted, white, 7c.; light amber, 6c.

The demand for honey is exceptionally good, owing to the crop in this vicinity being very light. A. B. WILLIAMS & CO.

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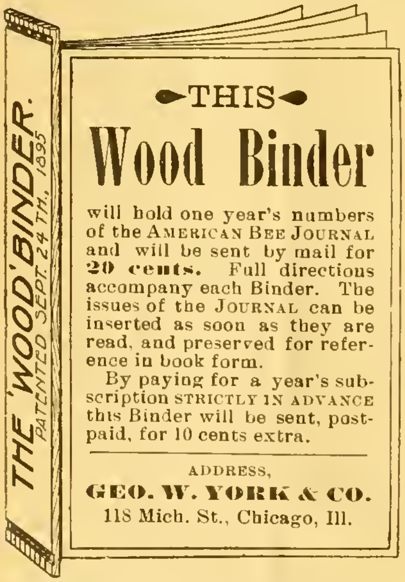

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38th Year. CHICAGO, ILL., SEPTEMBER 22, 1898. No. 38.

CONTRIBUTED ARTICLES

Bee-Eating Insects—Cow-Killers, Etc.

BY PROF. A. J. COOK.

Mr. J. H. Hempel, of Louisana, writes as follows:

"By this mail I send you in a queen-mailing box two insects, which species are plenty among the bee-hives. I think they kill bees and eat honey, as I see them frequently going into the hives. Of course I kill them when I see them, but they are difficult to kill, as they have red scales over the body which are as hard as a hickory-nut; so of course the bees cannot sting them, and they do what they please in the hive. Please let me know the name of this insect, and all you know about it. They also have a terrible sting, and I am informed that their sting is far more painful than is a bee's sting. They may be alive when they reach you."

This is a "cow-killer," "cow-killer ant," or "solitary ant," all of which names are applied to the species. They are known to kill bees, and one is figured and described in my Bee-Keepers' Guide, page 427. They are found from Illinois to the Gulf, and through Texas to this coast. They are comparatively common here. The most common ones here are like the ones sent by Mr. Hempel—red, with a black band. Others here are gray. The females are wingless, but the males usually possess wings. The insects look much like ants, but are solitary, not living in colonies. They are fossorial. That is, they dig holes in the earth in which, like many of the wasps, they rear their young. They belong to the family Untillidæ. They have a very hard crust, which serves as an armor. It is this crust, not the hairs—red or gray—which makes them so hard to kill. It is often quite difficult to pierce them with a strong pin. As Mr. H. says, they are possest of a powerful sting. I suppose this gives the name "cow-killer."

They do kill bees, surely. I should like to know if they ever do eat honey. I have never had proof of that, but it may be true. Wasps and ants of similar habits possess a sweet-loving tooth. As I have never seen these off the ground, that is, in trees or shrubs, where they could glean nectar or honey-dew, I surmise that they are simply predaceous, and kill and eat other insects, and do not feed on honey.

Like most insects that kill bees, I think these do far more

Company Gathered in Mr. Kreutzinger's Apiary to witness the "Honey Harvest," Aug. 27, 1898.—See page 596.

good than harm. They are not sufficiently common to kill many bees, and for the most part feed on injurious insects and so do great good. While I would not complain of Mr. H., or blame him for killing these when he sees them, yet I would have him know that they have their good side, and are by no means exclusive enemies.

CALIFORNIA BEE-KILLER.

There is another animal in California—not at all rare—which I figure and describe briefly, in my book, as the "California bee-killer." It is not an insect at all, but belongs to the scorpion branch of the spider class. Therefore, it is possest of eight instead of six legs. It looks, as will be seen by the figure (Bee-Keepers' Guide, page 432), like a long spider, but in having a segmented abdomen, and pincer-like jaws, it is more closely related to the scorpions. All that I have seen are whitish, gray, or dark in color. These, like the cow-killers, enter bee-hives and kill and eat the bees. I have heard of this work in Northern California, and in Inyo as well as in Southern California. Like the cow-killers, these are predaceous, and so do much good—I think far more good than harm. The double-acting jaws which resemble the pincers of the scorpion and lobster enable this animal to give a formidable bite, as I have often proved by teasing them with a stick.

ROBBER-FLIES.

The robber-flies (see Bee-Keepers' Guide, page 415, for illustrations), are also very common in Southern California. These large, savage two-winged flies are rightly called "bee-killers" in some sections. They do not enter the hives, but hover about the entrance and, eagle-like, swoop down upon the unsuspecting bees, pierce them with the strong beak, and suck their blood. In some sections these great robber-flies are quite serious pests. Yet they kill so many injurious insects that they are not to be wholly condemned. It is strange that these flies can do such ferocious work. I have known one to attack, overpower, kill and suck bloodless a big, savage tiger-beetle.

We have found here that the king-bird, or bee-martin—a different species from the one common in the East—is not about the hives solely to capture the bees. We find more robber-flies than bees in their stomachs. Indeed, I have not found a bee as yet, but have taken several robber-flies from birds killed in the apiary, which were supposed to be killing bees. I have, however, pretty good evidence that they do sometimes kill and eat bees.

DRAGON-FLIES.

The only other insects in Southern California that I have known to kill bees are the beautiful dragon-flies, darning-needles, or lace-wings. While these mosquito hawks, as they are also called, are far less common than in the East, they are often seen, and claim not a few bees to make up for their vigilant search for injurious insects. Like the other species, they rarely do anything like the harm that they do good. On the whole, they are likewise friends.

Los Angeles Co., Calif.

Methods of Ventilating Bee-Hives.

BY WM. M. WHITNEY.

There seems to be no small degree of agitation lately among the wise heads in our bee-keeping fraternity, respecting ventilation of the bee-hive. Some advocate the use of front wedge-blocks; some, front and rear spaces; others, blocks under the four corners of the hive; and still others, raising the cover.

Now, all of these methods of ventilation, excepting the last mentioned, are applicable only to hives having loose bottoms, and every one of them, under certain circumstances, are subject to serious objections, which, it seems to me, will be suggested to any experienced bee-keeper.

My hives are what are known as the two-story Falconer chaff, having tight bottoms—have tried others, but like this better than any other I have seen for wintering out-of-doors, and for manipulation as I have learned to do.

My colonies are very strong—made so by careful building up as they need room, to two stories of 20 frames, as early as possible after the season opens; and when they show signs of "hanging out," I simply remove one or two frames from the brood-chamber, according to circumstances, and re-space the others, which settles the difficulty with my bees. I also remove the super of frames from the upper story of such as I wish to run for comb honey, and substitute section-cases. The wider spaces in the brood-chamber gives freer access to the upper story, and I find my bees occupy it very fully as soon as the change is made; and when I raise the enamel cloth, they poke their little heads up through the bee-space and say, "Thank you."

It must be quite a difficult task for a bee to make its way up through a mass of bees to the surplus chamber, when spaced close as we usually put the frames, when brood-rearing is started in the spring.

But, it may be objected to my practice, that the bees will thicken the comb in the brood-chamber so as to reduce the spacing. I think not, if there is a prolific queen to occupy the frames with brood; and especially so if the bees are working in the surplus chamber; at least this is my experience. My hives have an entrance of ⅜x8 inches, and by practicing as above described, I have no lounging outside by the strongest colonies I can create. If bees need so much ventilation, why do they carefully stop up with propolis every crack and crevice they possibly can? It is more room in which to move about that mine seem to want, and I think my method of ventilation subject to less objection than any other with which I am acquainted.

Of course, any manipulation of a colony of bees must be done at the proper time and in the proper manner to secure the desired results; which means that the successful bee-keeper is one who has his eyes wide open all the time, and sees and appreciates what is going on in his apiary from day to day, and from what he sees, and from what he reads, is prepared to take advantage of circumstances.

The more I study my bees (and that is pretty nearly all the time), watching their various operations, their changing conditions, caused by changes of weather, varying seasons, as well as difference in methods of handling them, the more I am convinced that bee-keeping is not only the most complex but the most interesting of all rural pursuits.

Will some one of our scientific students of the fraternity tell us why the bees always before leaving the hive for their journey, wipe their eyes with their "forepaws?" You may ask, Do they? Yes, they invariably do so. It is done as they approach the exit where the light strikes the eye, or as soon as they reach the alighting-board.

Kankakee Co., Ill., Aug. 12.

Extracting-Supers—Italians Gather Better Honey.

BY C. P. DADANT.

In the last few weeks I have had several inquiries from bee-keepers who use extracting-supers of the same depth as the pound-section supers, with a request for an opinion in the matter.

We use an extracting-super that takes a frame 6 inches deep, and after trying both this and the full-frame super on a large scale, that is, on hundreds of colonies, we have a very decided preference for the former.

As for the shallow 4-inch extracting-super, we can see no benefit in its use. In the producing of extracted honey we may very confidently expect a yield of honey about double of that harvested in the comb, that is, after the comb has been once built and can be returned to the bees to be refilled at the beginning of each honey crop. An extracting-super only four inches deep gives too little room to the bees, and if two supers have to be used instead of one, there are too many combs to handle to expedite matters and enable us to handle our hives economically.

On the other hand, a full-depth super very often gives the bees more room at one time than they can readily occupy. If the colony is not strong, and the super is put on the hive early, such a large amount of space is difficult to keep warm, and breeding is delayed. If the bees begin work in the deep super it often happens that the queen ascends to it and begins laying, and the colony sometimes forsakes the lower story and transports its entire force to this upper story. With 8-frame Langstroth hives the additional room given by the adding of a second full story may very often be welcome to a prolific queen that finds herself crampt for room in the lower apartment, but as the queen is usually unable to entirely fill the whole 16 frames with brood, the result is that a part of this upper story may be occupied with honey and the other with brood, and honey has to be extracted from combs containing brood. We found the same circumstances with two-story 10-frame Langstroth hives, and after several years of trial finally fixt on the 6-inch super as the most practical. With a super of this depth extracting is more rapid than with either the shallow or the deep story, for the combs are more regularly filled with honey, and breeding in these combs is more exceptional. The outlay in cases for extracting-combs is but a trifle, and, in my opinion it is out of the question to use the same cases for both comb and extracted honey, for the very good reason that after our extracting-combs are once built they must be preserved if we wish to derive all the benefits that are expected from the production of extracted honey, and nothing is better to contain these combs while not in use than the very cases in which they have been built.

I do not see where Mr. Deacon (page 563) found instructions from us to make the top-bar of the extracting-frames 1⅛ square. We do not make them this heavy, and if we have ever recommended any such top-bar it must have been by some error. Our book, "Langstroth Revised," gives the thickness as ¾ inch, which is rather light for brood-frames, but all right for an extracting-frame 6 inches deep. As to the bottom-bar, we make them ⅜ inch thick, for two reasons: In the first place, we make our end-bar only ¼ inch thick and nail it into the bottom-bar, instead of nailing the bottom-bar into the end-bar, as usual with the Langstroth hive. On the other hand, we have found, and probably many others have noticed also that it very often happens that the bees build more or less brace-combs and bridges between the brood-chamber and the super, or between the several supers, and when they make these braces very strong it sometimes happens that a thin bottom-bar will bend and yield when the super is taken off. This is our reason for making the heavier bar. This is a very unimportant matter, anyhow, as we have plenty of room in our hives and supers for what wood is needed, and the cost is very nearly the same.

DO ITALIAN BEES GATHER BETTER HONEY?

I notice that there has been quite a discussion in the American Bee Journal as to whether, and why, the Italian bees gather better honey than other bees. I have noticed this peculiarity myself a number of times, more especially when honey-dew and clover honey are to be found at the same time. I have also noticed in August black bees on buckwheat bloom while no Italians could be found on it. Evidently the Italians were finding something better, for they were working as faithfully and as successfully as the others, and, in fact, the honey crop of the Italians was in many instances of greater quantity as well as of better quality.

To me, there is but one explanation of this fact. The Italians have more developt olfactory nerves than the others, and are better fitted to select their food. It would also appear that their taste and likings are similar to ours, and that what suits their palate best is also our choice. In the choice between clover honey and honey-dew the contrast is so great that there is nothing apparently extraordinary in a markt preference for the former product; but in discerning between buckwheat honey and knot-weed, the Italians undoubtedly show a very notable ability and good taste.

Hancock Co., Ill.

Bee-Chat, or Various Notes and Comments.

BY HERMAN F. MOORE.

RED-CLOVER ITALIANS.—As to pure Italian bees, or certain selected strains of them, working on the big red clover, why can't we have a general experience-meeting from all the readers of the American Bee Journal? If we can lengthen the tongues of bees by selected breeding, let us know it. If they (the long-tongued bees) come from some particular district in Italy, let us know that. In a year like this the possession of such bees would mean thousands of dollars to apiarists all over the United States.

SECTION-CLEANERS.—In the midst of all this talk about machines for cleaning sections, let me make a discordant note. The people don't want the sections so clean. They don't eat the wood. They cut it off and throw it away at once. More than that, the mere presence of the wax and bee-glue or propolis on the wood of the section is to them a badge of purity and honor. Again and again have these expressions been used to me: "No bee ever made that." "It's too pretty." "That's the way a man makes honey." Just hand them a comb well smeared with propolis, and they say: "Ah, that looks right." "That reminds me of the honey my father used to get on the farm." "That is real bee-honey," etc.

The people have it in their heads that comb honey is made without bees, and they don't want any of it. Argument is useless—they have just made up their minds, and immovable as an oak they stand. Let me tell you, if you want to sell them any of *your* honey, don't dwell too strongly on the fallacy of this belief, for you only antagonize them to no purpose. Only when you become well acquainted with them, and have won their confidence by fair dealing and good stuff, can you use your heavy arguments and deal sledge-hammer blows, and do good in so doing.

A LITTLE BEE-EXPERIENCE.—Tho my mother began keeping bees over 30 years ago, and I have been more or less associated with bees ever since, this is my first year to have my own bees at my own home. I have increast from one colony to 8, and intend to winter 10. Next year I shall try to produce the maximum of honey from 10 colonies, and prevent all swarming over one from each colony. My better half is intensely interested. We find the sting of a bee is not serious for either of us, when promptly removed with the fingers. I purpose to undertake a campaign of education among the near-by farmers; distribute Alsike clover leaflets among them, try if we can't crowd out the cockle-bur with sweet clover, etc.

SPRAYING CROSS BEES.—I want to ask J. A. Golden whether he thinks it would be all right to spray the bees with ether or chloroform when they are a little cross. That is just what he was doing, when he used sunflower to smoke them. No wonder they were easily quieted. Mrs. Moore had a sort of asthmatic cough as a finale to her la grippe. To relieve her a pipe full of stramonium leaves—sunflower leaves—and saltpeter was advised. "The only objection," the doctor said, "was that all these were narcotics."

Try well-dried rotton wood, and see if that does just as well, Mr. Golden.

TWO-STORY BROOD-CHAMBERS.—The more I think over and experiment on it, the more I am convinced that two stories for brood in early spring is necessary to the greatest success, viz.: greatest number of pounds of surplus honey, when honey comes. Now, can't Editor York get a show of hands, somehow? Number of pounds of surplus (comb or extracted) for the last five years in one-story brood and in two-story brood-chambers. I think it would be largely in favor of two-story brood-chambers. The only objection to this plan for general adoption is the undue booming of supply dealers' business, but, "the greatest good to the greatest number."

DRAWN COMB.—I see that L. Stachelhausen thinks that just as much comb honey as extracted can be produced by the use of drawn comb foundation. I think not; in extracted honey production the same combs can be returned and refilled several times in the same season, and the work of finishing the sides and corners of the comb is greatly in favor of large frames, from which every bee-keeper knows our liquid honey is taken.

This is a question of interest to all bee-keepers, for if as much comb honey as extracted can be produced by any known process, that will result in removing hundreds of tons of extracted honey from the market; or rather, it will go to the market as comb, and the price of extracted honey in the wholesale markets might in case of a general production of comb instead of extracted, be doubled.

Suppose, Mr. S., you try three colonies for comb and three for extracted honey under the very best conditions, and report results.

FENCE-SECTIONS.—I am trying fence-sections, and shall reserve my final verdict until a crop of honey produced in them shall declare. But there is no question that if we can, by their use, prevent air-holes around the edges, they will be much more popular with the consumer. He thinks of nothing else than the loss of the wood and wax, and, Doolittle to the contrary notwithstanding, prefers a section fastened to the wood all around. He doesn't have in mind the more or less convenience of using the section on the table, but solely of the two or three extra ounces of honey he thinks he is getting.

My trade has always been nine-tenths liquid honey. People say, "Comb has too much wood," "too little honey,' "they're too dry," etc.; and in a lot of pound sections they have a quick eye for those sealed along the edge.

FACING HONEY.—Don't you ever face your honey or your apples. No consumer ever demands it, no matter what the commission merchant or the grocer wants. Every consumer calls it "lying and stealing," and I think so, too. It is no answer to say people expect to be fooled; they don't; they are constantly trying to guard themselves against it; they don't expect it any more than Richardson expected to pay Sheridan's bill. Sheridan had been driving out three or four hours in a hackney coach, when, seeing Richardson pass, he hailed him and made him get in. He instantly contrived to introduce a topic upon which Richardson (who was the very soul of disputatiousness) always differed from him; and at last affecting to be mortified at Richardson's arguments, said: "You really are too bad; I cannot bear to listen to such things; I will not stay in the same coach with you." And accordingly got down and left him, Richardson hallooing out triumphantly, "Ah, you're beat, you're beat!" Nor was it till the heat of his victory had a little cooled, that he found out he was "left in the lurch" to pay for Sheridan's three hours' coaching!"

Making One's Own Hives.—I suppose it is perfectly in order to criticise the critic. Mr. R. L. Taylor is promulgating some rank heresies, and must be "called down." He says: "One cannot afford to keep many bees unless he is skillful enough workman to make his own hives," etc. I think a show of hands will prove that 95 percent of the bee-keepers don't agree with him. And how can the individual compete with steam and high-priced special machinery, especially as hot competition has given us one-fourth the prices of former days? I think the enormous demand for bee-hives and supplies there has been for two or more years past, proves that the majority know they *can't* afford to make their own hives, etc. No man can make one dollar a day at the factory prices making his own supplies, making no mention of workmanship, either, which must of necessity be greatly in favor of machine-made hives.

Stimulative Feeding.—Again, Mr. Taylor says: "I am satisfied stimulative feeding does not pay." Now, Mr. Taylor, you're certainly dead wrong. I started with one strong colony last spring, having 10 to 15 pounds of stores left over from winter. I wanted to increase largely—to 10 colonies, if possible. I fed small amounts of honey and water every evening for weeks, and the result—I have now seven more colonies, all with young laying queens, and all the progeny of the one colony on which I practiced stimulative feeding. Now is not this the aim in all stimulative feeding? I can rear bees for less than $2.00 a colony by this means, not including the hives, of course.

Grammar and Rhetoric.—As for Mr. Taylor's criticisms of certain bee-keepers' grammar and rhetoric, all will agree that they are entirely out of place in a bee-paper. But of course it is nice to understand Michigan rhetoric, and know wherein it differs from that of the settled portions of the country. Cook Co., Ill.

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Is Bee-Poison an Antidote for Snake-Poison?

BY D. D. BLAKEMAN.

On page 393 is the following paragraph:

"Immunity from Snake-Poison.—Th. Weippl, editor of Bienen-Vater, quotes from an Austrian paper, without vouching for its truth, the statement that a French chemist inoculated dogs with poison extracted from bees, and the dogs were then unharmed by the bite of deadly snakes."

May 31 of this year, on picking up a hive-cover lying flat on the ground, I was bitten by a rattler a foot and a half long, coiled under the board. The sensation was like having needles driven deeply into the flesh of the end of the middle finger, not like bee or mosquito stings.

Now, I have 70 colonies of bees, and I attend to them alone, and am almost immune to bee-stings. Does this immunity extend to snake-poison? I will give an account of the case:

The swelling did not extend to the second joint, altho I expected that it would at least reach to the shoulder. About four hours after the bite, I had very considerable pain in the wound, but not more than one would expect from needles (fangs) driven nearly or quite to the bone of the finger. This pain ceast so that I was able to sleep after five hours—no further pain nor unnatural feeling in the finger. All that was left of the injury was a very black spot one-fourth inch in diameter, which faded out in two weeks.

Now for treatment: I have always understood that any treatment of a rattlesnake-bite is merely palliative. First, I suckt vigorously at the wound for perhaps two minutes. Second, I tied a tight ligature of twine about the finger. Third, I used aqua ammonia upon the wound. After three hours I took off the ligature and drest the wound in turpentine.

Now, altho I have killed another rattlesnake since my first encounter above described, I was not such an enthusiast in science as to give it an opportunity to strike me in order to test this immunity theory more thoroughly; but there may be persons among the readers of the American Bee Journal thoroughly saturated with bee-poison, who might give additional information to establish or disprove any such theory.

San Bernardino Co., Calif.

Kreutzinger Apiaries and "Honey Harvest."

BY J. T. HAMMERSMARK.

My first acquaintance with Mr. Leo Kreutzinger, who owns the most extensive apiaries in Cook Co., Ill., was in 1897, and in August of that year I received an invitation from him to attend a "honey harvest." Of course I was ready for all such fun, and at the appointed time appeared with smoker and veil, and thus armed we (Dr. Peiro and myself) made for the bee-hives, and got the honey, of course, but something else besides—*stings*, till we could not rest. One fellow visitor got so many that he had to go off and rest, but then he couldn't rest.

But now it is of this year's doings that I wish to speak. Tuesday, April 12, was a warm day, so I put the bees out on the stands, as I commenced working for Mr. Kreutzinger April 1, 1898. After spring dwindling was over, he had 58 colonies of bees to start with. A great many nuclei, and some full colonies, were bought last spring, and now, with the increase of this season, he has 211 colonies of bees—114 being in his home yard, 85 in the out-yard, and 12 at his place of residence.

L. Kreutzinger.

The "bee-palace," with observatory, which you see in the picture, was built last spring. It is two stories high, and contains four rooms down stairs—shop, honey-room, fumigating-room, and a dwelling or sleeping room for the apiarist.

The second story is one large room used for a storage-room, etc. Above this is the cupola, wherein are at present located four colonies of different strains of bees in glass observatory hives: common Italian, golden Italian, Holy Land, and Adel bees. These were bought for the purpose of finding out which was the best bee, as well as for observation, but it will take a few seasons to settle that question properly. So far our common Italians from our own yard have done the best.

August 27 (last month) Mr. Kreutzinger had another "honey harvest." Amongst those present we had a Japanese gentleman. He had just arrived from Japan, where he labors as a missionary in the Presbyterian church.

Mr. K., scarcely distinguishable, is standing near the entrance of the door at the left. (See illustration on first page.) The young man in white, standing among the hives, is myself. I wear light-colored clothing, as I am convinced that it is more agreeable to the bees than black or dark clothes. You see very few if any of the people present have on veils. Well, there were none needed, as the visitors, after a trial of 10 or 15 minutes with veils on laid them aside, for they see that the army of bees about them are almost as gentle as flies. I do not think that any one got stung, altho the visitors were roaming amongst the hives the greater part of the afternoon.

And the place enclosed with wire netting purposely for their protection was very much neglected, except when they were treated to honey and biscuits, of which all present were invited to have their fill.

Before this, however, when most of the people had assembled, Mr. Kreutzinger invited the visitors into the house and informed them that the manager would entertain them, which meant that he would escort them through the house and show them the wonders of beedom.

As we entered the shop we found three women seated about tables scraping sections; another was grading honey and filling shipping-cases; one man was taking honey out of supers, and another nailing up shipping-cases; also some one was selling and wrapping up the cases—a very crowded, busy little place.

A glance at the other rooms was taken, and we then went upstairs, where were shown section-presses of the latest kind, a honey-extractor, in which some honey was extracted in their presence. Other things, too numerous to mention, were shown and explained.

We then moved upward to the cupola, where the bees were seen working in glass hives.

When it was announced that a queen would be shown, the visitors were all attention, and so curious were they to see this very important bee that they all gathered around the hive that was to be opened. The apiarist told them there was no danger for the lookers-on, and at once proceeded to open the hive. After a little hunt he pickt up the queen—a beautiful Italian—and put her into a glass tumbler turned upside down. After everybody had paid their respects to her majesty, she was returned to her home.

About 6 o'clock in the evening the company disperst, and thus ended Mr. Kreutzinger's second annual "honey harvest."

Cook Co., Ill.

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Moving Bees—Some Personal Experiences.

BY H. E. HILL.

The occasional reference to this subject in current bee-literature, bearing evidence, as it does, of a general interest in the preparation and care of bees in transportation, together with the many requests received for more of our personal experience, are the only apologies we have to offer for devoting so much space to a subject that we had grown to regard as pretty well worn.

But here we are reminded that each year adds to our fraternity many young members, from whose ranks must develop the Doolittles, the Hutchinsons, etc., of the future. And their enthusiastic missives, pleading for light upon the subject of their newly-awakened interest, recall personal experiences eminently calculated to incite a deep appreciation of our pleasant privilege and present duty to freely impart to this most earnest and ever-hopeful multitude whatever aid may be derived from the lessons of our own bee-keeping life.

At some period in the life of most bee-keepers the matter of moving becomes one of personal and direct interest. If this condition transpires during his earlier day in the business, considerable anxiety is involved, and information from every available source is eagerly sought; while, tho not having had occasion to give the subject previous consideration, the experienced apiarist who finds himself making preparations for a move, does so almost instinctively. Every detail tending to success in the projected move receives minute attention, without an anxious thought as to the result. Guided by a thorough knowledge of their characteristic peculiarities and requirements, gained by years of practical work, the bees' every need is considered and provided for; and necessary variations conforming to varying conditions are readily recognized by the practiced eye, and treatment is accordingly applied.

That it would be impossible to give stated rules for the preparation and care of bees in moving that would suit all cases is one lesson which our experience will illustrate.

The transportation of bees in box-hives is rarely practiced beyond a local move, which we have upon several occasions accomplisht with success by simply confining the bees with a strip of wire-screen over the entrance, loading them into a wagon and driving to the new location. The combs in such hives are secured naturally, and after having been in use for several years are very tough, so that no special care need be observed in handling; and to facilitate loading compactly, may be carried bottom upwards as safely as in their natural position.

There is one rule, however, that has a general application in preparing bees for a move—one that is effected neither by the style of hives, extent of the trip, or other conditions, viz.: Always carry a wad of cotton-batting as a ready and effectual means of checking any possible escape of bees that may occur.

Under certain favorable conditions bees may be kept confined to their hives in transit for weeks with perfect safety; while under the excitement of adverse circumstances they may die within a few hours. It is a fact also worthy of note that as bees differ in temperament otherwise displayed, so are some colonies disposed to take confinement seriously, and keep up a constant hue of complaint; while others, under the same treatment, cluster quietly and appear to appreciate the comforts provided by their thoughtful keeper.

In the fall of 1886, having been engaged to establish an apiary on the south coast of Cuba, we purchast 15 strong 3-frame nuclei from a breeder in Ocean county, N. J. They were shipt by express to New York as the beginning of their 15 days' trip, where they were placed in an empty room for two days to await the deferred sailing of the steamer. Upon each screened top was placed a sponge saturated with water, and a space of one inch was left over the frames, which were secured by notcht sticks across the bottom into which the bottom-bars rested.

On the third day they were loaded upon a dray, driven to the wharf and carried aboard the Ward Line steamship Cienfuegos, bound for Havana, and placed forward on the main deck, where they remained during the voyage, and were carefully watcht.

They would sometimes become restless as a result of insufficient ventilation; or, as often from too much draft or excessive heat, and were promptly treated accordingly. On hot days a sprinkling of salt sea-water was administered to each colony. That they appreciated these showerings was shown by the greedy manner in which the last drop was invariably taken up, while the sponges soakt with fresh water were receiving little or no attention.

Arriving at Havana four days later, they were transferred to lighters and taken ashore along with other freight, where they were objects of great interest to the assembled Havanese in the government warehouse, in which they were placed with our other supplies during the customary routine of business which every foreign importation involves.

The business manager of the new firm by which we were employed being a Spaniard, our duties were confined to the care of the bees, which were evidently a great novelty to the interested crowd, who, much to our discomfort and the bees' displeasure, persisted in blowing tobacco smoke through the screens. Our knowledge of the Spanish language rendered any verbal admonition out of the question entirely, tho with some emphasis a rebuke in our native tongue proved equally as effectual.

After a stop of three days in Havana, the bees were removed to the railway station, and under our personal care taken to Batabano, a small town on the south coast, which has since been demolisht by the insurgents. Here they were transferred to a coastwise steamer for another sea voyage of 160 miles over the Caribbean to Cienfuegos, a considerable seaport recently advertised extensively. Here, again, they remained confined for three days while we were selecting a permanent location for the apiary, which was finally decided upon about three miles back from the city, whence they were taken upon a huge native cart, placed upon their new stands and liberated. Not to exceed 200 bees were found dead in the hives; queens were all lively, and brood in good condition, and during the first hour of freedom in their new tropical home many returned from a prospecting tour with abdomens distended and pollen-baskets filled.

Our plans were to buy native colonies, transfer them to Langstroth frames, and Italianize from the stock we had taken from the United States; hence, the end of the foregoing experience was the beginning of another more tedious and widely different. One hundred colonies of native stock were now required to carry our arrangement into effect, and there being no bee-keepers in the vicinity we were obliged to look them up in the interior, and from 5 to 20 miles distant, and move them on ox-carts to our new location. From the most inaccessible places it was necessary to "pack" them upon the back of mules.—American Bee-Keeper.

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

☞ See "Bee-Keeper's Guide" offer on page 607.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Pollen in Super Honey—Ripening Honey.

1. I have a number of colonies of bees in larger hives, perhaps nearly twice as large, some of them, as the Langstroth hive. As I am not able to transfer them, how would you work them to prevent them from carrying pollen up into the early super honey, which they did?

2. What can I do with those that have pollen in them here and there?

3. How do you ripen honey after it is removed? and what supports its weight? MICHIGAN.

ANSWERS.—1. I don't know why there should be any more trouble with a larger hive about pollen going up, and if it's the size that makes the difference I don't know of any remedy. To tell the truth, I don't know why it is that there are some cases in which bees carry up pollen. It is possible that there is more likely to be trouble when hives are shallow. The natural instinct of the bee seems to be to put pollen around the brood-nest, and with the sections sufficiently far above there is seldom any trouble. But I don't know for sure any way to prevent the trouble in all cases. If any one does, I'll be glad to hear from him.

2. Use them on the table at home, or else sell them by themselves at a lower price. But those that have only a cell or two of pollen are not much hurt by it. Sometimes, however, a section may have a good many cells containing pollen, but as the cells are all sealed over they don't show. If such a section were sold for a perfect one, a customer might be disgusted with it. Hold it up so the light can shine through it, and the pollen will show.

3. A room of the house was built specially for it, with floor so strong there is no trouble about the weight. The sections are brought in, super and all, stackt up in piles, four blocks being placed under the first super to raise it ¾ inch from the floor, and the same blocks are used between the supers in the pile, so the air can pass freely through. The piles are placed something like 8 inches apart for passage of air. A screened window and door on the south side of the room, with the same on the north side, gives pretty good chance for ventilation, and they are left thus till about time to put them in shipping-cases.

Robbing—Water-Melons for Bees—Transferring—Introducing Queens, Etc.

1. I have some trouble with my bees robbing each other, and some stray bees are robbing mine. An old bee-keeper told me to close up part of the entrances on the hives, and then break some of their combs, that is, some of the robbers' combs. Since I have done that with my bees, they have stopt robbing, but the stray bees I do not know what to do with.

2. Would it be any harm to the bees to cut up a load of dead-ripe water-melons, once a week, for 40 colonies.

3. When is the best time to transfer bees? I have a colony in a log that I found in the timber. I would like to get it into a hive.

4. When is the best time to introduce queens?

5. Which kind is the better—three or five-band Italians? IOWA.

ANSWERS.—1. Breaking out the combs is hardly advisable. It may start a bigger case of robbing than you had before. In the case of robbing, an ounce of prevention is better than a pound of cure. Don't expose combs of brood or honey, or bits of honey, to start robbing. Don't keep queenless colonies. If a colony has a good queen it ought to defend itself if you close the entrance so that only a single bee can pass at a time. If the colony is queenless, put it in the cellar and give it a queen. Next evening set it on its stand, contracting the entrance, and it will have life enough to repulse the robbers. But in many cases it may be just as well to break up the queenless colony. But if you do, don't take the *hive* away, for if the hive is still there the robbers will be less likely to attack the nearest colony. A plan given in one of the foreign journals seems to answer pretty well. Attach something like a cigar-box to the entrance, having no chance for bees to get in or out except through a hole an inch long and a quarter of an inch wide at the middle of the box, on top as the box lies before the hive. The robbers are wary about going *down*, while the bees belonging to the colony don't mind it. In a bad case of robbing you may come out ahead by piling loose hay or straw as high as the hive, then keeping it thoroughly sprinkled with water.

2. If they have no other stores for winter, I don't know just what would be the result of filling them up with melon-juice. I think some one at one time reported something of the kind, but I don't remember the outcome. Possibly some one with experience will help us out.

3. They will probably winter better where they are than to be transferred so late in the season. During fruit-bloom is the usual time for transferring.

4. Queens may be introduced almost any time during the flying season. During the honey harvest and fall is as good as any, because the loss of a queen doesn't mean so much then, and the interruption of laying doesn't make so much difference.

5. You can't lay down a hard and fast rule and say that all five-banders are better or worse than any three-banders. There are some excellent ones in both classes, as well as some poor ones. The colony that does the best work is the one to breed from, no matter how many bands, providing you have a fixt strain.

Keeping Bees on Shares—Double-Walled Hives.

1. I have had quite a considerable experience in bee-keeping for the last 30 years, but not to make an exclusive business of it. I started here with three light colonies in boxes, transferred them to movable frames, increast to nine, buying extra Italian queens, and took 75 pounds of comb honey. Several others within a radius of five miles seeing my success are anxious to put some money into bees, and have me manage and care for them on shares, from 5 to 20 hives in a place. They can buy box hives with bees for about $2.00 each. If I furnish the hives, transfer, Italianize, furnish surplus boxes or extract, what share should I receive for one or for two years? Or, what would be an equitable division of expense and profit, I doing all of the handling of the bees?

2. I can get cypress boards ¼-inch by 4 inches wide, and 20 inches long, for about $2.50 per 1,000. From timber ¾-inch or 1 inch by 1¼ or 1½ at about the same, my idea is to make a double-walled hive, upper and lower stories, the same filled with sawdust. Would it be cooler in summer and warmer in winter, enough to justify the extra expense of making up? FLORIDA.

ANSWERS.—1. As a rule, anything in the line of partnership operations in bee-keeping is not very satisfactory. As you put it, you furnish all the care and labor, and all the supplies, the other party merely furnishing a hive of bees valued at $2.00 and a place to keep them. One way to look at it is to say how much he should have for interest on his investment and rent for the land occupied. If money is worth from 6 to 10 percent interest, 25 cents apiece ought to pay him annually for the number of colonies started with, he to have that same number back at the close of the arrangement. If he gets his share in honey or bees, instead of money, then put a fair price accordingly. A more satisfactory way, probably, would be for you to own the whole outfit, and if you can buy for $2.00 a colony it will not need a very big capital.

2. From general reports in that line, I doubt if you will be very well pleased with such hives, but you might try it on a small scale along side of other hives.

Preventing After-Swarms.

Suppose I act on the Heddon principle, that is, move the old stand and set the new swarm in its place, setting the old one beside the new for about six days. Then how would it do to put a bee-guard on the old hive and keep it on through the daytime, removing it at night, to prevent the after-swarming? Could the young queen get through the guard? I am very anxious to prevent so much swarming. IDAHO.

ANSWER.—If your experience is like mine, you'll not like the plan at all. Taking off the guard at night will hardly make any difference. The queen and drones will stay in at night anyhow, so it will not help to take off the guard. When I tried it, the bees would swarm out day after day, even if the queen couldn't get out, and sometimes she would get out. The bees from three or more colonies would cluster together on a tree, and then perhaps all go back to one hive, leaving the other two depleted. But if you set the old colony close beside the prime swarm, and then six or eight days later set the mother colony in a new place, will you have any after-swarming?

Possibly you may like Doolittle's favorite plan. On the eighth day after the prime swarm, just before bed-time, put your ear to the hive and listen for piping of the queen. If she doesn't pipe, listen every night till 16 days after swarming, and if there's no piping by that time there will be no more swarming. If you hear piping any night (generally you'll hear it, if at all, 8 or 10 days after the prime swarm), next morning cut out every last queen-cell, shaking off all bees from the combs in front of the hive, so you can more readily see the queen-cells. Then you've got a sure thing of it, for you know there's a live queen at liberty in the hive, and you know there's no chance for any more. The only trouble is that unless you're very careful you may miss a cell.

Introducing Queens—Swarming.

1. When is the best time to introduce queens, in the spring, summer or fall? And what is the best way to introduce?

2. What causes bees to swarm in some years more than others? TENNESSEE.

ANSWERS.—1. It is probably a little easier to introduce them in the height of the honey-flow. It interferes with egg-laying to introduce a queen in spring—a time when it is important to have breeding advance as rapidly as possible. In the fall is perhaps the best time so far as concerns the interruption of egg-laying. If you buy queens, you will receive them in shipping-cages with instructions for introducing by means of these cages, which are introducing-cages as well as shipping-cages. If you have a queen of your own rearing in a nucleus, a good plan is to take a frame of brood from the nucleus, bees and all, with the queen on it, giving it to the queenless colony.

2. The difference in seasons makes the difference in swarming. If a season is so poor that the bees hardly get enough to live on, there will be little or no swarming. If they get enough for their own use and just a little more, the season continuing this way a long time, there will be a great deal of swarming. If the honey-harvest comes on with a rush, continuing heavy while it lasts, the bees will give their attention less to swarming, and more to securing the harvest.

Queen Failed or Lost in Mating.

I have a colony of bees that superseded its queen about the first of August. They had built but two queen-cells; a swarm came off when the first one that hatcht was 48 hours old, but about one-half of the swarm returned to the old stand. I hived those that clustered, as I wanted to save the queen—she was a golden Italian. I put an empty super on the old stand, and did not molest the hive again until to-day (Sept. 5) when I thought I would see how the queen had mated. I found the super and brood-combs solid full of honey, with the exception of one center comb which contained a path of drone-cells three inches in diameter; they contained larvæ, and some just sealed up, and eggs in a few worker-cells adjoining. What is the trouble, and what am I to do? NEW YORK.

ANSWER.—Either the queen failed in mating or was lost. Probably the best thing you can do is to unite the two colonies. The one with the queen is not likely to be very strong, as part of its bees went back, and the one without the queen will rapidly shrink in numbers from this time, if it has not already done so. Unite the two, and you will probably have a good, strong colony for winter. Some of the combs of honey can be saved out, and you will probably find plenty of use for them next spring, if no other colony needs them now.

Swarms Returning to Wrong Hive, Etc.

I put into winter quarters last winter eight colonies and three 3-frame nuclei, and came through the winter, by feeding, all right, only losing one nucleus. Four of the colonies were in 8-frame and four in 10-frame hives. Swarming commenced June 6, but it was so windy that the bees had to watch their chance to swarm out, none hanging out before it started. I managed my swarms after the Heddon method, with clipt queens, and find it works perfectly. The last swarm that issued, June 25, came back in about 10 minutes, but entered a wrong hive, that is about eight yards from the old stand, and which had swarmed four days before. All the swarms (8) were managed exactly alike, on frames with starters and on frames with built combs. The 8-frame hives gave better returns than the 10-frame.

The honey-flow here is mostly from white and Alsike clover; there are some wild weeds but they don't amount to much.

My experiment with sweet clover is a failure. It came up all right and then dried out.

1. Why did that swarm enter the wrong hive, as the clipt queen was put back on the old stand?

2. To winter bees on the summer stands in a wet country like this, is wheat chaff the best to be used to be put into the supers and beside the brood-chamber, so as not to have the bees too damp?

3. What has the temperature to be outside, so the bees can build combs in the supers in a single-walled hive?

4. Is it necessary to have it air-tight between the super and brood-chamber?

A good many colonies in this county died last winter for the want of food. WASHINGTON.

ANSWERS.—With clipt queens you will frequently have swarms return to the wrong hive. Especially if a swarm has returned to a hive a short time before and there is excitement at the entrance, a swarm will rather go there than go back to its own hive. And sometimes they will go to some other hive than their own when you can see no reason for it.

2. Timothy is perhaps preferred. Of late years much has been said in favor of dry planer-shavings.

3. A strong colony will build comb when it's down near freezing, if there is sufficient need for building, that is, if they are crowded for room to hold the honey.

4. No, not absolutely air-tight, but the closer the better when it's cool. When the weather is hot enough, they don't seem to mind big cracks.

Honey as Food is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey among should-be consumers. The forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 30 cents; 50 for 50 cents; 100 for 90 cents; 250 for $2.00; 500 for $3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for $1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at $1.00), and 10 cents extra.

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 20 cents; 100 for 35 cents; or 200 for 60 cents.

The Wood Binder for holding a year's numbers of American Bee Journal, we propose to mail, postpaid, to every subscriber who sends to us 20 cents. It is a very simple arrangement. Full printed directions accompany each Binder. Every reader should get it, and preserve the copies of the Bee Journal as fast as they are received. They are invaluable for reference, and at the low price of the Binder you can afford to get it yearly.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all other bee-keepers possible to subscribe for it.

AMERICAN
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The New Officers of the United States Bee-Keepers' Union, forming the Executive Committee, elected at Omaha last week are as follows:

President—Hon. E. Whitcomb, of Friend, Nebr.
Vice-President—C. A. Hatch, of Ithaca, Wis.
Secretary—Dr. A. B. Mason, of Toledo, Ohio.

It is more than likely that the meeting next year will be held in Philadelphia, Pa.

The Omaha meeting was one of the very best and most harmonious ever held by the national organization of bee-keepers. We expect to begin the publication of the full report of the proceedings in the first number of the Bee Journal for October—week after next. In the meantime prepare for a rich treat.

◆

Distributing Honey-Leaflets or booklets is one of the best ways to create an interest in honey and its uses. Referring to this in Gleanings for Sept. 1, Editor Root gave this paragraph:

> "Now is the time to distribute the honey-leaflets. They were written with special reference to the consumer who has been persistently educated to the notion that all comb honey is "manufactured stuff," and the extracted is always adulterated. Among other things they show that honey is more palatable and wholesome than any other sweet in the world, and how it may be used in cookery. The leaflets are sold on the basis of cost, as it is to our interest, as well as to that of bee-keepers in general, that they be scattered broadcast over the country."

Our little 24-page pamphlet on "Honey as Food" is one of the neatest and best things to be used in the line suggested. Prices will be found in the book-list in this number, top of second column. Send stamp for a sample, anyway.

A Source of "Red Honey" Explained.—Mr. Geo. Thompson, of Kane Co., Ill., wrote this amusing paragraph for Gleanings, its heading reading "How the Bees Stole Currant Jelly:"

> "A few years ago Mr. James Marvin, of St. Charles, Ill., who will be remembered by some of our old-time bee-keepers, had a curious incident in this direction. In looking through his hives one day he saw his bees had been gathering some red honey, and it puzzled him to tell where they were getting it. A few days afterward he overheard some of the women telling about one of their neighbors who had been making some currant jelly, and she had put it out on the window-sill to cool, and then went visiting that afternoon. When she came home she found all her jelly gone, and the tumblers lickt clean. 'Oh, the plaguey boys!' said she. This, of course, was a clew for Mr. Marvin, and upon further examination he found it was the old lady's currant jelly the bees had stored away for winter use. Of course, he kept that to himself; but we had a good laugh over it."

◆

Bees Don't Like Black.—Dr. Miller, in Gleanings, sometime ago, suggested that bees had a strong aversion for black, and since then testimony corroborating that statement has been coming in. One man who has very black hair says the bees "fairly go crazy to get into said hair."

Several weeks ago we invited a neighbor's 7-year-old boy to come over and watch us work with the bees, take off some honey, etc. He came, and almost immediately upon opening the first hive the bees made a dash for his black stockings and black knee-trousers. Oh, but they did sting the poor little fellow terribly. We were surprised at the sudden charge of the bees, and now believe it was the blackness of the boy's clothing that so angered them.

So the lesson to be learned is, to be drest in light-colored clothing when working with bees, and thus avoid unnecessarily irritating them, causing them to sting much worse than they otherwise might.

◆

The Season of 1898 has probably been one of the poorest ever known for bee-keepers, and perhaps the best ever known for supply manufacturers and dealers. The general failure of the honey crop is not confined to this country, for wails come from Great Britain and Europe as well. The manufacturers' crop is estimated by the A. I. Root Co. to be double that of any previous year, that company alone having disposed of 70,000 hives, with a chance at 10,000 to 30,000 more if they could have supplied them promptly.

◆

The Illinois State Fair, at Springfield, begins Sept. 26 and ends Oct. 1. A grand program of special attractions has been arranged for each day of the fair. We hope that the apiarian exhibit will be even larger and better than last year, if that is possible in this year of short honey crop. In order to prevent a further reduction in the list of premiums offered, bee-keepers must put up a show that will encourage an increase of premiums rather than a further decrease.

◆

Montana as a Bee-Field.—The senior editor of Gleanings in his wanderings in Montana found large tracts of alfalfa at Miles City and Billings, and at Forsythe large tracts of Rocky Mountain bee-plant, the ground covered with it and looking at a distance like pink snow-banks, but on neither of these plants nor on any of the wild flowers did he find a single bee. He found one subscriber to Gleanings, but he had no bees as yet, and didn't know of one within a hundred miles in any direction.

◆

Another Unfortunate Bee-Keeper.—Some time ago we announced the misfortune that befell Thomas McDonald, a bee-keeper at Shawneetown, Ill., who lost his all in the great flood that swept that town last spring. Many generous-hearted bee-keepers responded, and doubtless Mr. McDonald was enabled to get started again with bees.

This time the unfortunate one lives in Florida, and he wrote thus to Editor Hill, of the American Bee-Keeper:

STUART, DADE CO., Fla., Aug. 4, 1898.

FRIEND HILL:—Our home, which is no more, was the scene of a sad event on July 31. My 10-year-old boy was burned to death; my house, with all its contents, was destroyed by fire. My wife, myself, and one small child barely escaped with our lives, and as a result of my burns and exhaustion I am now in bed. We had not time to save a thing but ourselves from the flames. The neighbors have kindly given us some things in the way of bedding, dishes and provisions. But I must close, as I cannot write more at present.

Yours, J. P. LEES.

Editor Hill says that Mr. Lees is a bee-keeper who but recently settled at Stuart, "with naught but a large family of small children and a determination to carve out a home in the wilds of Dade county, with but one hand, having lost the fingers of his left hand by accidental contact with a saw. In addition to the loss of a honey crop as a result of forest fires in this locality this year, the above pathetic note tells of greater trouble."

Now, it would be a nice thing if each of our readers who can afford to do so, would just mail Mr. Lees a dollar or so to help him "get on his feet" again. You would never miss the amount, and all together it would be such a help to him. Let all who feel like it, send at once, so that Mr. L. may the sooner recover from his sore loss.

THE WEEKLY BUDGET

AN OWNER of a thousand colony bee-ranch in Los Angeles county is said to be about to purchase a home for himself and family near Oakland, Calif. We have not learned the gentleman's name.

MR. M. F. REEVE, in the American Bee-Keeper, writes thus:

"The eagle and the bee figure prominently among the decorative emblems of the Napoleonic period. Golden bees decorated the imperial mantle and the throne."

W. S. HART, of Volusia Co., Fla., wrote us recently:

"FRIEND YORK:—The Moore articles on marketing honey are valuable. Don't give up the reform in spelling. People will get used to it after awhile, and there are but few who will not value the time and space saved, and the getting of more matter to the page."

TOMMY, aged 4, had discarded his shoes and stockings one warm afternoon, and while playing encountered a bee. He ran into the house crying, and his mother askt what the trouble was. "I j-just kickt a f-fly," sobbed the little fellow. "Well, that's nothing to cry for," said his mother. "But t-this one had a ss-splinter in its tail," was the rejoinder.—Newspaper.

MR. HARRY S. HOWE, of New York State, gives this sage advice in the September American Bee-Keeper:

"Go slow and take a few years to consider before you change the style of your hives. I am working yards having six entirely different hives, and can't see much difference in the results. Of course, only one kind is allowed in a yard. It is confusion worse confounded to have two styles of hives in one yard."

THE APIARY on the Levering estate in Siskiyou county, in the extreme northern end of California, will yield about four tons of honey this year. It contains some 250 colonies in Harbison hives. The season did not begin until July 1. This is not bad for a dry year. Under favorable conditions it is said it should yield 10 tons. The same number of colonies in the southern portion of the State, in a good year, would far exceed this last amount. There nectar verily flows from the flowers in some years.

MR. WALTER C. LYMAN is a bee-keeper having some 80 colonies in Dupage county, Ill., about 20 miles west of Chicago. In the spring he had about 60 colonies. The editor of the Bee Journal, with his wife, spent the larger part of the day Saturday, Sept. 10, at Mr. Lyman's. His mother, who will be 77 years old in December, is still well and as lively as a girl of 20. We had a most delightful time. Mr. Lyman's crop will be only about 900 pounds of comb honey this year, and many of his colonies will need feeding to carry them through the winter.

THE HIVE STATISTICS of the A. I. Root Co., for the season just past are interesting. They were publisht in Gleanings for Sept. 1, as follows:

"We find, on footing up our tally-books, where we keep a record of the different styles of hives packt for shipment, on orders we have sent out this past season, nearly 3,000 Danzenbaker hives; about 3,000 dovetailed chaff hives; about 7,000 10-frame dovetailed hives, and over 50,000 8-frame dovetailed hives, besides a great many of other styles for other people, so that, all together, we have disposed of at least 70,000 hives the past season, or about double the record of any previous year. It is also safe to say that we could have disposed of from 10,000 to 30,000 more if we could have supplied them promptly. We do not anticipate such a record next year, as there are, without doubt, a large number of the hives sold this year in the hands of bee-keepers, unused. In view of the outlook we have decided not to build the large addition to our factory, for which we had plans prepared two months ago. We do intend, however, to put in the larger engine, and extend our factory building 20 feet, adding some new machines, and changing others, so as to increase our capacity when needed."

The popularity of different hives may be judged to some extent by those sent out as noted above. Out of 70,000, 1 out of every 23 was a Danzenbaker; 1 out of 23 a chaff hive; 1 out of 10 a 10-frame dovetail; and 5 out of every 7 an 8-frame dovetail. The 8-frame seems to be far in the lead.

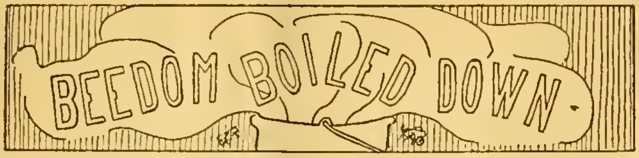
MR. A. I. ROOT, who recently visited the famous Yellowstone Park, sent a letter to his Sunday-school class of boys, in which he gave the following "bear story," which may interest some of the boys who read the American Bee Journal:

"The United States government protects the bears and all other animals here, so they are very tame. Well, a few days ago a large, fine bear climbed into the meat-man's wagon and pickt a large piece of beef out of one of the barrels while the man had gone into the hotel. The piece was so large the bear had to hold it with his forepaws while he walkt off on his hind feet. The man came out and caught him at it, and pounded him over the head with a club; but he wouldn't let go his meat, and got away; but he grunted and growled a good deal at the pounding he got.

"Well, when I heard them telling about it I wanted to see the bear, and a party of us went about half a mile and found him just about sundown, up in a big pine tree. I rather think somebody chased him up the tree. Well, we wanted to see him get down, and so a man climbed a slender pine-tree near him and began punching him with a pole. As soon as he saw the man coming up he prickt up his ears and began to growl and show his teeth. I tell you, he is a great beauty. His fur is soft and shiny, and he is just as soft and handsome as any kitten you ever saw.

"Well, the bear climbed as high as he dared on the slender top; but as the man kept poking him he kept growling at a fearful rate, and got awfully mad; but he went slowly still higher; finally, the slender limbs broke beneath his great weight, and down he slid with a great crash to the larger limbs, and then he began climbing down with a rush, for he was mad. At the same time the man began to get down lively, for he feared the bear might try to climb *his* tree after he got down. By this time a crowd of people had collected; and just for fun, while we were all laughing and yelling, some called out, 'Three to one on the bear!' others, 'I put my money on the man.' The man got down first, however, and then the bear wouldn't come down any more.

"A bear can go up a tree very fast, but he is awkward and slow in coming down, for he has to prick up his soft velvety ears that look so cute and cunning, and see where to put his great feet."—Gleanings.


BEEDOM BOILED DOWN.

Moisture in Bee-Hives in Winter is avoided by Ed. Freyhoff, editor Praktischer Wegweiser, by the use of cushions filled with powdered or slaked lime placed over the frames.

Self-Uniting.—In Le Progres Apicole a case is reported in which an Italian swarm with a young queen entered the hive of a black colony with an old queen. The old queen was killed and cast out, leaving the young stranger on the throne!

Elevated Lands for Honey are best, according to Val. Wuest in Deutschen Bienenzucht; and that explains why red clover—whose blossom-tubes must be a third or a half filled before the bee can reach the nectar—yields so much oftener in elevated than in low situations.

Drone-Combs for Extracting are Undesirable, says Lehrer Schunke, in Leipzg. Bztg. The bees cannot be made to understand that the queen will not occupy them for brood, no matter how much excluders are used, so except in a time of very heavy flow they will be left more or less unoccupied.

To Prevent Mould in Hives, the editor of Revue Internationale says a plan that has proved satisfactory to all who have tried it is to have an opening at the back as well as front under the hive, allowing the air to pass through. In this country the same object is attained by those who cellar their bees, by having a front entrance two inches deep, or by removing the floor entirely.

Milkweed Honey.—From a limited experience, the editor of American Bee-Keeper had formed the opinion that milkweed honey was of a dark, rather reddish color, good body, with pronounced but not unpleasant flavor. J. F. Eggleston, who has lots of milkweed within range, is positive it can only be told from white clover by its sulphur-colored cappings. Editor Hill is now on the fence watching for daylight.

Red Clover with Short Flower-Tubes is a desideratum for bee-keepers, and the "Societe d'Apiculture de la Haute Savoie" has recommended that the State Agricultural Society offer a prize of several thousand francs for a fixt variety of red clover having along with desirable qualities as a forage-plant flower-tubes short enough to be easily reacht by the honey-bee. Whether such prize will actually be offered is another story.—Revue Int.

"Emerge" vs. "Hatch."—Editor Hill quotes Doolittle in American Bee Journal, saying "Emerge, not hatch; the larvæ hatch," when speaking of a queen leaving a cell; agrees that "emerge" is the better word, but says there's no lack of authorities to justify the use of "hatch," among others the author of "Scientific Queen-Rearing." But Editor Hill ought to know that Doolittle has more age and experience than the man that wrote "Scientific Queen-Rearing," hence should have a better command of proper bee-terms.

Objections to Hives Raised on Blocks.—The editor of Gleanings thinks that when a hive is raised on four blocks, the operator will be in the way of the bees' flight, assuming that they will fly out all around. Dr. Miller says one might think they would do so, but as a matter of fact they don't. They seem to have settled upon the front as the right place for the entrance before the hive is raised, and they continue their entrance at that part after the hive is blockt up. But he says it's troublesome at swarming-time with clipt queens, for the queen is just as likely to come out at the side or back as at the front.

The Answers to Query 75, page 427, have secured the attention of the critic of the Bee-Keepers' Review, being given as an example of "careless reading of a question," and the American Bee-Keeper quotes in full the query and replies, saying between the lines, "You bee-keepers that are afraid to write for print, just look at this. Here's the work of some of the veterans in the business, and you may easily write as well as this with one hand tied behind your back." Several of the repliers make out that a queen is not usually fertilized till after she begins to lay, and Critic Taylor lets them down softly by saying it is a curious instance of failing to catch the meaning of a question, but aside from that there's a somewhat radical difference in the views held, making it appear that some of them have given the matter no attention, or else it's one of those things that vary according to "locality."

Are Clipt Queens Superseded Sooner than Others?—"A common notion seems to be that clipt queens are superseded sooner than others. Isn't that because you can always tell when a clipt queen is superseded, and with whole wings you can't easily tell whether there has been any change? If the average age of queens is three years, then a third of the queens are superseded every year. [That 'common notion,' like many other common notions, is not founded on facts. Queens clipt or not clipt live out their best usefulness in three years, and some think in two.—Ed.]"— Stray Straw, in Gleanings.

Working on the Two-Story Plan.—Dr. Miller says he uses only one hive-story in winter, on account of convenience in cellaring, but if he wintered his bees out-doors he would use two stories in winter. In the spring the extra story is given when convenient, usually some little time before the extra room is actually needed. He takes away the extra story at the time of putting on supers, as with the two stories on at that time comb honey is not a success. Editor Root, however, seems to favor keeping the two stories running throughout the season, even for comb honey, providing the two stories are crammed full of bees from bottom-board to cover.—Gleanings.

The Essential Points in a Hive-Cover are thus given by the editor of the American Bee-Keeper:

"It must be a 'lawful' roof—one that is in fact a protection from storm—a roof that will shed all the rain, all the time. It should be close-fitting, in direct contact with the hive all around, and yet so constructed that it may be adjusted without force or jar. It should be a non-conductor of heat, and afford a ready means of providing ventilation through the hive when desired. As with all else about the apiary, it should offer no secluded harbor to vermin. When used over sections, it is of importance that an accurate bee-space be maintained, hence the necessity of a rigid and substantial cover, one that will not spring and warp out of shape, inviting propolis at this time, and at other times tempting robbers as well.

Starters vs. Full Sheets.—Editor Root has been paying especial attention to different lots of honey from various quarters, and he thinks that when a small starter is used in a section at least one-third of the sections will be filled out with drone-comb. Regarding the appearance of this he says: "I have just been looking over several lots of comb honey that have come in. Quite a number of the sections are built out with drone-comb, and are in every way inferior in looks and whiteness to the worker. I do not see how anybody can think one looks as well as the other. I askt one of our men, who did not know what I was driving at, to point out those boxes that, in his estimation, looked the prettier. He placed his finger on the worker-cell comb every time. I askt him why. 'Why,' said he, 'I do not like the looks of those great big cells.' There is another thing that may have something to do with the matter. Cappings of worker-comb are apt to be a little thicker, and therefore whiter. The capping of drone-comb is quite liable to be water-soakt or thinner.

Cultivating the Home Market.—In a very sensible article in Gleanings, R. C. Aikin explains why he prefers to sell at a low price in the home market rather than to ship off his honey. In the first place, he lives in a community where the people are in very moderate circumstances, and if the price of honey is high they can afford to use very little. That has decided him to produce extracted rather than comb. The custom of the locality leading in that direction, he trades honey for any article he needs. If he ships to Denver, his honey will net him about 5 cents. So he sells in the home market at 6 cents, strictly net weight, charging extra for the package when customers don't bring their own packages. He had bills printed and scattered broadcast, and used a lot of honey-leaflets. His crop of 5,500 pounds of extracted was all sold at home and he had to buy more. He feels sure of regular customers at 6 cents who have previously been using syrups at 3 cents, and many who have not previously used honey now say they cannot do without it. He favors the idea of educating the people to know what to do with granulated honey so as not to object to it.

BEST
EXTRACTED HONEY FOR SALE
ALL IN 60-POUND TIN CANS.

ALFALFA HONEY

This is the famous white extracted honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

BASSWOOD HONEY

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is greatly preferred by those who like a distinct flavor in their honey.

PRICES OF EITHER ALFALFA OR BASSWOOD HONEY:
A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—One 60-pound can, 7½ cents a pound; 2 cans, 7¼ cents per pound; 4 or more cans, 7 cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. This honey is all

Absolutely Pure Bees' Honey.....
the finest of their kinds produced in this country.

We would suggest that those bee-keepers who did not produce any honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. The pamphlet, "HONEY AS FOOD," will be a great help in creating customers for honey. See prices on another page.

GEORGE W. YORK & CO., - 118 Michigan St., CHICAGO, ILL.

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CHOICE QUEENS of the best strains of
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BEESWAX always wanted for cash or trade.
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A SERMONETTE.

[This week there happens to be a scarcity of "General Items," so we concluded to reprint an article appearing in "Our Homes" department in Gleanings for August 1, written by the senior editor of that paper. It will repay careful reading by every one, no matter what your religion, or whether you have any religion. Especially will its wise admonitions prove helpful to the younger people, if heeded. We think we need beg nobody's pardon for copying it, but believe we will receive the thanks of many who will profit greatly by its sage advice, drawn from long experience. Here is the "sermonette:"—EDITOR.]

And be sure your sin will find you out.—NUM. 32:23.

Sin is folly, and our text-book explains *why* sin is folly. It is folly because, sooner or later, it is going to be found out. Oh! why is it that humanity, with all the examples that are strewn before it at every turn, cannot learn that it *pays* to be honest? Now, dear old friend, do not think that I mean to commence this tirade by taking it for granted that *I* am honest, and that all the rest, or the greater part of them, are dishonest, for it is not true. I can truthfully and honestly say, "Why in the world can *I* not learn through all the examples that are round about me, that dishonesty and deceit do not pay? You ask if I really own up that I *am* dishonest? In one sense. There is a constant temptation running all through my life to keep things out of sight that do not look well—to keep on doing selfish things, and to try to cover them up or to make it appear that my motives were good ones instead of selfish ones. I do not believe, however, that these wrong things go on very long. The presence of the Holy Spirit I am praying for every day (and I hope I may say *feeling* every day), is con-

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The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated $2.00 per annum. Sample Copy Free.
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QUEENS.
Now is the time to re-queen, and the place to get them is from DANIEL WURTH. He furnishes good Queens by **return mail** for 45 cents each; 6 for $2.70; or $5.00 per dozen.
DANIEL WURTH,
36A4t Falmouth, Rush Co., Ind.
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SEND Your Address...
on postal card for a free copy of my book on Queen-Rearing.
HENRY ALLEY, Wenham, Mass.
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HONEY ⁂
If you want Colorado Alfalfa, Sweet Clover and Cleome honey—comb or extracted—correspond with the Secretary of the Colorado State Bee-Keepers' Association. Our Honey ranks high in quality. Car lots a specialty.
Address F. RAUCHFUSS, Elyria, Colo.
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Sweet Clover
And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5℔	10℔	25℔	50℔
Sweet Clover	.60	$1.00	$2.25	$4.00
Alsike Clover	.70	1.25	3.00	5.75
White Clover	.80	1.40	3.00	5.00
Alfalfa Clover	.60	1.00	2.25	4.00
Crimson Clover	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, wanted by freight.

Your orders are solicited.

GEORGE W. YORK & CO.,
118 Michigan Street, - CHICAGO, ILL.

"Early Wonder" Blackberry Plants.

Price, 25c per dozen; $15 per thousand. 150 pounds Spanish Needle Comb Honey, 14 cents per pound. **EDW. SMITH,**
38A2t CARPENTER, ILL.

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WHAT

part of a wagon wears out first? The wheels, of course. Why not buy wheels that can't wear out?
When a man buys the

ELECTRIC WHEELS

he always has good wheels on his wagon. **They can't Rot, Warp or become Loose**; no re-setting of tires; they fit any wagon. We also make wheels to fit anything wearing wheels Send for circulars and prices.

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The A. I. Root Co.'s Goods **Wholesale. Retail.**

Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**
Cash for Beeswax. BELL BRANCH, MICH.

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stantly prompting me to repent and reform, and make good my shortcomings. The great difference between the Christian and the unbeliever is, in my opinion, this: The Christian is being constantly prompted to repent, and fight down these selfish tendencies. The unbeliever may be prompted to a certain extent in the same way by public opinion and things of a like nature; but he is not looking constantly to the great Father above, and asking him to reprove and rebuke him whenever he is going wrong. A beautiful passage in the 139th Psalm, verses 23 and 24, brings this with wonderful vividness before us:

> "Search me, O God, and know my heart; try me, and know my thoughts; and see if there be any wicked way in me, and lead me in the way everlasting."

The matter alluded to in the above has been brought vividly to my mind at this season of the year, because, as usual, we have been obliged to decide what help we shall keep and what we shall let go. Our board of managers have consulted with the foremen of the different departments, and considered which ones we should keep. As a rule, the newer hands are expected to lie off and give place to the older ones; and other things being equal, this is the rule; but where one of the new hands shows unusual proficiency, or what is better still, a clean-cut, honest, and conscientious spirit, we often keep such and let the older ones go. In fact there is something inexpressibly sad to me, when we are dismissing help in the fall of the year. It comes along in the line of the homely adage, "A new broom sweeps clean."

With the younger ones we can make allowances. I remember one quite small boy who came to help us early in the spring, among the plants. He was so faithful, and did so well, and accomplisht so much work in a short time, that I really felt proud of him; but after a few weeks he seemed to get tired of the monotony of setting plants, and did not accomplish as much as he did the first week. So I decided I would have to let him go, because he would be looking around to the right or to the left, seeing what somebody else was doing, and paying no attention, comparatively, to his own work. Finally the boy was wanted in one of the buildings. I told the foreman that the boy had much ability, but he seemed to get tired of his work after a little; but he concluded to try him. For about a week the boy did tip-top. In fact, he was better than some of the older boys. But his zeal seemed to decrease as before, until he was of little use anywhere. Of course, I talkt with him and remonstrated but the good effect was only temporary. Now, this case we can excuse, because it was only a boy; but I think that that boy's mother had better watch carefully, and see to it that this trait does not follow him through life.

As I have said, we can excuse such things in a child, and many children outgrow them. I know this, for some of the most faithful and capable men and women I have around me had this very fault when they were small. Do you know, friends, it has been a rare pleasure for me through all these years of "work and wages" to see boys and girls grow from childhood into manhood and womanhood, and while they grow physically to know that they have grown in grace and wisdom, and in the knowledge of the Lord? But, even tho it is not a pleasant thing, I must go back.

I have seen those who seemed to be so sure *their* sins of this kind would not find them out that I have been obliged to let them go. Physicians have a list of diseases that are said to be, as a rule, incurable. Now, may God forbid that I should say that there are *sins* that are incurable; but sometimes I have been led to feel that it is almost that way. There are people who have been so habituated to cheating their employer that it seems almost as if they never *could* get over it. My first sad experience in this line happened so long ago that I think I can mention it without hurting anybody's feelings.

When I was in the jewelry business I had

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Warranted purely mated, just started to lay. **MUST BE SOLD SOON,** so order **QUICK.** 50 cents each; 6 for $2 75, or $5 00 per dozen. Ten years' experience with the best of breeders, and the best of methods enables me to furnish the **BEST OF QUEENS.** Safe arrival and satisfaction guaranteed.

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Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

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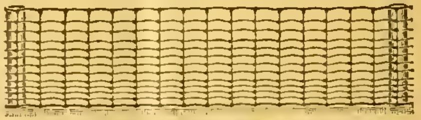

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Being the cleanest is usually worked the quickest of any Foundation made

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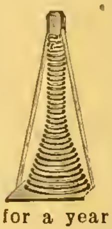

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GEORGE W. YORK & CO.,
CHICAGO, ILLS.

a sort of craze to manufacture gold and silver jewelry. I wanted to do this, because then I could give honest goods according to my notion. I applied to one of the down-east jewelry factories for a good man who could work solid gold and silver. Somewhat to my surprise they agreed to let me have a man who, they said, was capable, and the price he wanted was less than I expected. He proved to be all I wisht, and I often wondered why his employers let him go.

After he became pretty well acquainted, however, and settled down to a certain routine, I discovered why they were willing to let him go, and why he workt for low wages. First, he would get the daily paper under his bench, and, when no one was around, he would read the war news, getting 25 cents an hour for so doing. He had things planned and arranged so he could slip his paper out of sight when anybody came around who might report. Finally I found out he was making work for himself at odd hours. By playing detective a little I was finally able to prove that he received pay for all the time he spent on work of his own. As he was a good sort of man, and had done me quite a favor by leaving his home in the East, I good-naturedly let these things pass. Finally he solicited work from other people at lower prices than my own, doing said work on the sly while he was drawing pay from *me*. I felt that something had to be done. But even then for a time I put it off; but when it came to appropriating gold and silver, as well as precious hours of my time, for these outside jobs, I told him I thought we could not give him employment any longer.

There are several things I want to say right here in regard to cases of this kind. The first is, that investigating and proving charges like the above is, to my mind, the most wearing and exhaustive work that any one ever did. If any one thing will break down a person's health, it is being obliged to follow up and prove things of this kind. Again, with a life-long experience, I am not yet prepared to say that it is always the best way, to tell a man plainly and squarely that you have found him out. First, there is a difficulty in proving conclusively things that are clear enough in your own mind; and, finally, you make a man a lifelong enemy by telling him the truth, whereas, if you simply tell him you do not need him any longer, you and he may be on tolerably friendly terms if you happen to be near each other. Sometimes, by the grace of God assisting you, you can tell a man faults of this kind in a way that will make him a better man: but it almost always requires a great amount of grace to say just enough, especially when you are provoked, and not say too much or exaggerate the state of affairs.

Dear friends, I started out in this Home Paper today to say something that would help you—at least a great part of you; and may God give me grace and wisdom to say it as the Holy Spirit shall direct.

This thing I have spoken about is widespread. Men and women are complaining because they are out of employment. Some of them say that they cannot get work because they are "not in the ring." But when I hear such speeches I feel almost sure there is no "ring" about it. More people are out of work because they are not *conscientious* and *honest* than for any other reason. Yes, even *women* are dishonest. God knows how it pains my heart to say it. Even women, mothers of families, those whom we have a right to expect to be all that is good and pure, seem to have either never heard our little text at the head of this talk or else they have such an opinion of their own shrewdness that they think themselves exceptions, and that their peculiar "sins" will never "find them out." Let me say to such, you may *think* your employer does not know of the things you are concealing; but let me repeat with emphasis the words of our text, "Be *sure* your sin will find you out."

No doubt many people think us needlessly particular in our establishment. During these war times everybody wants to see a daily paper, and the newsboys are pushing them everywhere—that is, when they are allowed. We have forbidden the delivery of papers to our people while at work. I speak of this because I know how strong the temptation is to take "just a minute or two;" and if *one* does it, another will. We have also been obliged to forbid peddlers, book agents, and agents for everything else, coming on to our premises. Now, if these agents were conscientious and honest, we might, perhaps, permit them to come in before or after working hours; but I have learned by sad experience that it is not best to do even this.

Cash Paid for Beeswax!

For all the **Good, Pure Yellow Beeswax** delivered to our office till further notice, we will pay 25 cents per pound, CASH. No commission. Now if you want **cash, promptly,** for your Beeswax, send it on at once. Impure wax not taken at any price. Address as follows, very plainly,

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FOR SALE An **Out-Apiary** of 80 colonies of Bees in double-walled hives with extracting-combs, extractor, etc.

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OUR PRICES are worth looking at. We are making the new

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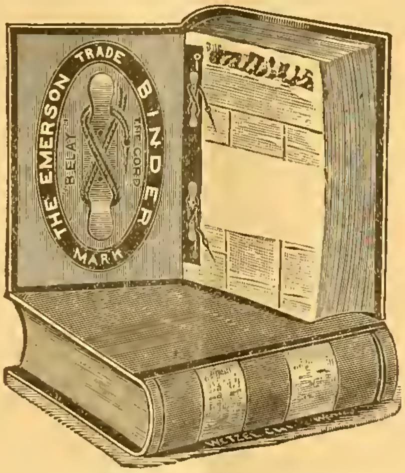
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That covers the whole Apicultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keeper's Guide.

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Tested Queens, $1.00 each; Untested, 50c. Prompt and satisfactory dealing.

Address, **E. L. CARRINGTON,**
11Atf De Funiak Springs, Fla.
Please mention Bee Journal when writing.

Do you say we make a fuss about little things? My friend, this fuss is made for your own good. The person who keeps his mind and his hands busy on the work he is *employed* to do right along through the working hours may be worth 25 cents an hour or more; but if he is stopping his work to notice everything that is going on, to go over to his neighboring workmen to talk about things not pertaining to the business, he will be worth to his employer only 15 or 20 cents an hour, or even less. Why, I have had men (and women, too) in my employ who finally became so demoralized in this very way that I made up my mind that they hindered business more than they helpt, and that we should get along better if we paid them their wages to have them stay at home and not come near us, and they *had* to stay at home finally without any wages at all. One reason why we have had such extreme cases is because we dislike to make a fuss about things that look on the face of them to be small and unimportant, and so we good-naturedly let the things pass until there has to be a sudden reform.

I want to say a word more about doing work for yourself when you have hired out to somebody else. If I wanted to get good pay in any establishment I would be very careful about small matters. If I wanted to write a letter in regard to my own affairs while in the employ of somebody else, I would speak to my employer about it, and take out the time it occupied, even if it did not take me more than five minutes. You may say this is a small matter; but small matters help to make up solid character. The man who is known to be scrupulously honest in details will very soon get to be trusted, and will get large pay accordingly. I can often measure a man's worth the first day he works. A boy may be excused for running to the clock every little while to see what time it is; but a grown-up man should be ashamed to do things of this kind. There are people who are constantly hunting up pretexts and excuses to leave their work and to go off after something. I have had men who always wanted a different tool from the one I gave them, and who would spend more time in going after a tool they pretended they wanted than it would have taken to finish the work with the tool they had.

In regard to the old adage, "A new broom sweeps clean," this ought to be exactly the other way when applied to reasonable beings. The man who has charge of a certain line of business for several years has learned many crooks and turns. He has learned by long experience, and sometimes by sad experience, how to avoid mishaps. There are many departments where it really takes years to become proficient in all the details. The old hand at the business should be worth two or three times as much as a new hand. Now, this is all true; but it is too often the case that, instead of trying to keep up with the times, and improve still more in his vocation, he gets to shirking, and finally to cheating; and then the adage becomes true. The old broom must be replaced by a new one, not because the new one is any better, but because the old one absolutely will *not* do that which he knows very well how to do.

During the dull season of the year we have always been more or less annoyed by gossip during working hours. Now, this habit of gossiping with a fellow-workman is one of the diseases that I have learned to fear is incurable. One who is addicted to

BEE-BOOKS

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George W. York & Co.,

Chicago, Ills.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, $1.00.

Langstroth on the Honey-Bee, revised by Dadant—This classic in bee-culture, has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages; bound in cloth.

Price, postpaid, $1.25.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof A. J Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages; bound in cloth and fully illustrated.

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A B C of Bee-Culture, by A. I. Root.—A cyclopædia of 400 pages, describing everything pertaining to the care of the honey-bees. It contains 300 engravings. It was written especially for beginners Bound in cloth. Price, $1.25.

Advanced Bee-Culture, its Methods and Management, by W Z. Hutchinson.—The author of this work is too well known to need further description of his book. He is a practical and entertaining writer. You should read his book. 90 pages, bound in paper, and illustrated. Price, 50 cts.

Rational Bee-Keeping, by Dr. John Dzierzon—This is a translation of his latest German book on bee-culture. It has 350 pages; bound in paper covers, $1.00

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called BEES OF HONEY. 100 page pamphlet. Price, 40 cents.

Bienenzucht und Honiggewinnung, nach der neuesten methode (German) by J. F. Eggers. This book gives the latest, most approved methods of bee-keeping, in an easy, comprehensive style, with illustrations to suit the subject. 50 pages, board cover. Price, 50c.

Bee-Keeping for Beginners, by Dr. J. P. H. Brown, of Georgia. A practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit. 110 pages, bound in paper. Price, 50 cents.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 p.; illustrated. 25c.

Convention Hand-Book, for Bee-Keepers, by Thomas G. Newman.—It contains the parliamentary law and rules of order for Bee-Conventions—also Constitution and By-Laws, with subjects for discussion, etc. Cloth, gold-lettered. Price, 25 cts.

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The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only ONE book can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted, see postpaid prices given with the description of the books on this page. Following is the clubbing-list:

1.	Langstroth on the Honey-Bee	$2.00
2.	A B C of Bee-Culture	2.00
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6.	Dr. Howard's Foul Brood Book	1.10
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25.	Commercial Calculator, No. 1	1.25
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27.	Kendall's Horse-Book	1.10
30.	Potato Culture	1.20
32.	Hand-Book of Health	1.10
34.	Maple Sugar and the Sugar Bush	1.20
35.	Silo and Silage	1.10
36.	Winter Problem in Bee-Keeping	1.30
37.	Apiary Register (for 50 colonies)	1.75
38.	Apiary Register (for 100 colonies)	2.00

it will certainly get very small pay. Another thing, these sins always grow upon us. A person who succeeds in taking a few pennies out of the money-drawer without being discovered, will, in a few days, take more; and you all know where it ends. Our text tells it exactly. Now, the person who begins to work at something belonging to himself while his employer is away is exactly like the one who puts his hand into the money-drawer. His sin will grow upon him unless his employer's reproof (or the influence of the Holy Spirit) stops him in his career. The man who takes money out of the drawer is called a *thief;* but the man who takes a few minutes several times a day, and succeeds in skillfully concealing the fact from his employer, will keep on taking more and more. Yet such a person would blush to be called a thief. But what is the difference? If you are receiving 30 cents an hour for your work, and you succeed in getting in ten minutes for yourself without being discovered, you have taken a nickel from your employer. And what is the difference whether it be taken that way or from the money-drawer? You may suggest that we are oversuspicious; that a good many take out the time, or work at some other time enough to make it up. This is true. Before condemning a person he is generally watcht for quite a period of time; he is almost always greatly astonisht to know that anybody has been watching him.

Let me make a suggestion: If you take a little of your employer's time, and afterward work enough or more to make it up, be careful to speak of it to your employer, or, in a large establishment, to the time-clerk, for he is very likely to be questioned in regard to this matter; and it will be worth a great deal to you for him to be able to say, "That is all right. This person spoke to me about it at the time." The Bible exhorts us to "shun even the appearance of evil," and good business common-sense should teach us the same thing. Let all our acts be such that they will at any time bear investigation without embarrassment or quibbling.

I have said some pretty severe things in regard to humanity, and it has pained me to say them. Now let me say this: There are many boys and girls in my employ who are as honest as the day is long. Sometimes things have come up that seemed to reflect on these—I almost wanted to say "my jewels." Well, they *are* jewels, indeed; and when anybody hints at anything that is crooked or dishonest, or that even looks bad, you do not know how it rejoices my heart to say, "Why, that boy is as honest as the day is long. I will guarantee that, whatever the grievance is, if you will let me take hold of it I will bring out the facts showing that he is clear and straight as the light of day." Sometimes I can add, "He is in my Sunday-school class, and I know him through and through." Oh, how I do delight to get hold of such boys! I rejoice to take them by the hand, and look them square in the eye. Whenever an opportunity occurs I like to introduce them to my friends, and speak an encouraging word in regard to them. As a general thing, such boys and girls are Christians. They belong to the Sunday-school, and, of late, generally to the Endeavor Society also, or some similar organization among the young people. I often predict that such boys and girls will fill high places of honor in time to come; and it delights my heart to say in after years, when I hear that some one of them is a college professor, or has gone to the missionary field, or is filling some other important post, "There, I *told* you so!"

Now, dear friends, whoever you may be, please believe I am right when I tell you that no one thing can contribute more toward getting better pay, no matter for whom you are working, than to keep in mind this little text—"Be sure your sin will find you out." And when old age comes on, and grim Death calls, besides the better pay here in this world you will find eternal life beyond, amid the companionship for ever and ever of the good, the honest, and the pure in heart. A. I. ROOT.

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This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

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☞ See Honey Offer on page 603.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Sept. 10.—Honey has sold well for past few days, and all of the best white comb that is in proper shape sells at 12c. Off grades of white, 10 to 11c; amber, 9 to 10c; dark grades, 7 to 8c. Extracted, white, 5 to 7c; amber, 5 to 6c; and dark, 4½ to 5c. Beeswax, 27c. R. A. BURNETT & CO.

St. Louis, Sept. 9.—Fancy white comb, 12 to 12½c.; A No. 1 white, 10 to 11c; No. 1 white, 9 to 10c.; dark and partially filled from 5 to 8c, as to quality. Extracted in cases, No. 1 white, 6 to 6½c; No. 2, 5½c; amber, 5c; in barrels, No. 1 white, 5½c; amber, 4½ to 5c; dark, 4 to 4½c. Choice Beeswax, prime, 24c; choice, 24½c. At present there is a good demand for honey. WESTCOTT COM. CO.

Kansas City, Sept. 9.—Fancy white comb, 12@13c; No. 1, 11@12c; amber, 10@11c. Extracted, white, 5½@6c; amber, 5@5½c; dark, 4½@5c. Beeswax, 22@25c.

The receipts of comb honey are larger.
C. C. CLEMONS & CO.

Columbus, O., Sept. 15.—Fancy white comb, 14 to 15c; No. 1 white, 12 to 13c; No. 2 white, 10 to 11c; fancy amber, 10 to 11c.

Fancy white continues scarce and wanted. Those having any to market will please correspond with us.
COLUMBUS COM. AND STORAGE CO.

New York, Sept. 1.—We have a good demand for new crop comb honey, and it is beginning to arrive. Have sold some shipments at 14 to 15c for fancy white, 12 to 13c for No. 1 white, and 10 to 11c for fair white. We think these will be about the ruling prices this fall; exceptional fine lots may sell at a little more. Extracted is in good demand at unchanged prices. Beeswax dull at 26 to 27c. HILDRETH BROS. & SEGELKEN.

Boston, Sept. 16.—Fancy white in cartons, 14c; A No. 1, 12½ to 13c; No. 1, 11 to 12c; No. 2, 10 to 12c. California extracted is practically out of the market. Florida in barrels is selling from 6 to 7 cts., according to quality. Beeswax, 26 to 27c. Very light stock; only fair demand.

The fall demand for honey is now opening, and from present indications we look for good prices right through the season.
BLAKE, SCOTT & LEE.

Indianapolis, Sept. 1.—Fancy white comb honey, 12@12½c; No. 1, 10@11c. Extracted, white, 6@7c. Beeswax, 25@27c.

Only a few arrivals of fancy white comb; market almost bare, and demand good. Quite a little comb honey from honey-dew is being offered, but there is simply no demand for the stuff. WALTER S. POUDER.

Milwaukee, Sept. 1.—Fancy comb, 11 to 12c; A No. 1, 10 to 11c; No. 1, 9 to 10c; amber, 7 to 8c; old and dark, 5 to 6c. Extracted, white, in barrels or kegs, 5 to 6c; dark, 4 to 5c. Beeswax, 25 to 26c.

The market for honey is in very good condition; while there is yet a little of the old crop on hand, it is in very good order, and some demand, which will clear off everything before the new crop will arrive, very plentifully. There is already some receipts of new, but mostly extracted, and some very good quality, yet we fear the danger is in extracting too early, before the honey is fairly ripened. We anticipate a good demand a little later, and think values will remain about the same as present quotations. A. V. BISHOP & CO.

Buffalo, Sept. 16.—There is quite an improved demand for honey at present, and moderate amounts can be sold of strictly fancy 1 pound comb at 11 to 12c; lower grades range from 10c downward. We advise but moderate shipments for awhile yet. Extracted—average grades could be sold at 4 to 5c. Fancy beeswax, 27 to 28c; common, 20 to 25c. BATTERSON & CO.

San Francisco, Aug. 24.—White comb, 9 to 10c; amber, 7 to 8½c. Extracted, white, 6@6½c.; light amber, 5½ to 6c. Beeswax, 24@26c

Stocks are of very moderate volume, both of comb and extracted, and market remains firm at ruling rates, especially for water white or light amber of desirable flavor. There is a fair local demand and some business on foreign account. The bark J. C. Glade, clearing Monday for Europe, took 808 cases, valued at $6,250.

Cleveland, Sept. 1.—Fancy white, 13@14c; No. 1, white, 12@12½c; light amber, 11c; buckwheat, 9c. Extracted, white, 7c.; light amber, 6c.

The demand for honey is exceptionally good, owing to the crop in this vicinity being very light. A. B. WILLIAMS & CO.

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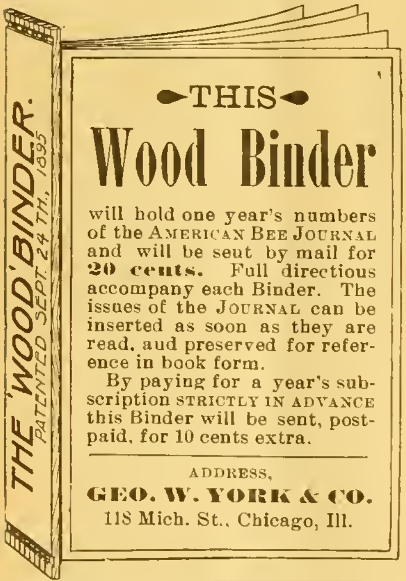

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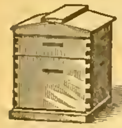

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38th Year. CHICAGO, ILL., SEPTEMBER 29, 1898. No. 39.

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With Others, During the Next Ten Weeks....

Bee-Keeping in Cuba and Porto Rico—
By O. O. POPPLETON, of Florida.

Recent Progress in Apiculture—
By ERNEST R. ROOT, Editor Gleanings in Bee-Culture.

Bee-Keepers and Supply Manufacturers—
By DR. C. C. MILLER.

Foul Brood in the Apiary—
By WM. MCEVOY, Foul Brood Inspector of Ont., Canada

Advanced Methods of Comb Honey Production—
By S. T. PETTIT, of Canada.

Migratory Bee-Keeping—
By H. E. HILL, Editor American Bee-Keeper.

The Scientific Side of Apiculture—
By C. P. DADANT.

Experiences and Suggestions in Marketing Honey—
By S. A. NIVER, of New York.

Best Method for Creating and Maintaining a Market for Honey—
By HERMAN F. MOORE.

First Half Century of Bee-Keeping in America—
By HON. EUGENE SECOR. General Manager United States Bee-Keepers' Union.

The Apiary on the Farm and in the Orchard—
By HON. E. WHITCOMB, Supt. Apiary Department Trans-Mississippi Exposition.

Needs of Bee-Culture in the South—
By DR. J. P. H. BROWN, of Georgia.

General Advice to Bee-Keepers—
By REV. E. T. ABBOTT, of Missouri.

The Relation Existing between the Apiary and the Successful Production of Fruit—
By G. M. WHITFORD, of Nebraska.

The foregoing List of Special Articles represents a part of the program at the Omaha Convention. Many of the subjects will be followed by much helpful discussion. Of course, many other interesting and valuable contributions will be found in the American Bee Journal during the 10 weeks' "trial trip," besides the other regular departments. But in order to secure all the above articles, the trial subscriptions should be sent in **promptly.**

Every Bee-Keeper in America ought to have the old American Bee Journal for 10 weeks from Oct. 1, 1898, and right along thereafter. It will be worth to any one of them **many times** its full year's subscription price. **Send 10 cents Now, anyway,** and get it for the next 10 weeks.

Invitation to Our Regular Readers: We trust that our present subscribers will send the names and dimes of their neighbor bee-keepers, or get **them** to do it. Show them this liberal trial-trip offer. They should jump at such an opportunity to get 160 large pages of the best bee-literature for only 10 cents!

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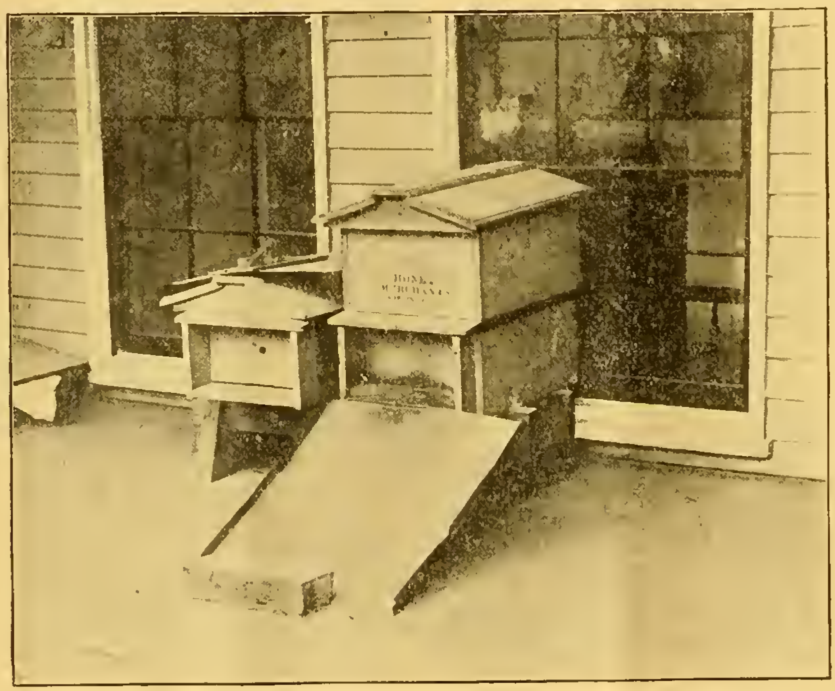
CONTRIBUTED ARTICLES

City Bee-Keeping Pleasurable and Profitable.

BY JOHN R. SCHMIDT.

The thought of keeping bees in a city naturally makes one think it is only an experiment, and that no profit can be derived from it. It has been proven, nevertheless, that it is no longer an experiment, but can be made a source of pleasure and profit. Just as poultry-keeping is taken up by some city people as a source of recreation and a means of relieving their minds from the business cares, bee-keeping is also rapidly finding favor among a large class of people who find pleasure in spending their holidays and idle time among their bees.



A City Roof-Apiary.

What a source of pleasure and recreation it is, after returning from the busy city at the close of a hot summer's day, and as one passes among the white hives, sees the bees standing thickly at the entrances busily engaged in evaporating the new honey which they have gathered during the day. What could please the bee-keeper more than to find, on turning back the cover of one of the supers, there exposed to view so many completed sections filled with snow-white comb honey, which he knows will find a ready sale at 15 to 20 cents a pound? This is the pleasure and profit which a city bee-keeper derives from his bees, and the chief source of making city bee-keeping so popular.

THE LOCATION.

Almost all bee-keepers of Cincinnati are located in the Ohio valley on the outskirts of the city and on the hilltops, but some of the enthusiastic bee-keepers actually keep bees on housetops in the very heart of the city. A photograph of this curious way of keeping bees is here shown. It was taken from the roof of Chas. F. Muth & Son's store, and this apiary once numbered 40 colonies, but at present there is only one full colony.

Mr. Muth said: "These bees yielded a surplus of about 60 pounds of comb honey during a good season, and always wintered without any loss." This apiary is located on a tin roof about a hundred feet from the ground, and is protected from the hot sun by a small roof which is not shown in the photograph. The bees can only forage in one direction, and to reach this they are compelled to cross many housetops.

There are some apiaries which contain about 50 colonies a few miles from the city, but these cannot be clast among our city apiaries, so I will not describe them.

The apiaries located in the valley and on the hills are small, the number of colonies rarely exceeding 12; these small apiaries are quite numerous, there being about 75 colonies within one mile of my apiary.

The hive almost universally used by the bee-keepers here is the 10-frame Langstroth, the 8-frame hive having been tested by some, and found to be too small, as the bees almost invariably swarm during the latter part of April, just when the strength of the colony should be kept together as they are about to enter a period of about three weeks during which no honey can be gathered.

The hives are arranged in a long row generally running parallel with some fence or wall, and have from one to three feet of space between each hive; but this all depends upon the amount of space which can be given the bees, as often they are crowded together with no space between the hives, all manipulations being done from the rear. The picture will convey the idea. (See next page).

SOURCES FROM WHICH BEES GET HONEY.

The first honey brought in by the bees is from the fruit-bloom; this stimulates them to active brood-rearing, and where small hives are used the bees often swarm. Then comes a period during which the bees gather no honey at all, which lasts about three weeks, then white clover begins to bloom, followed closely by the sweet clover, which is the chief honey-plant in this locality, and the only one from which surplus honey is derived.

The colonies are by this time very strong, having been stimulated by the fruit-bloom, and now prevented from swarming by the lack of honey coming in between the fruit-bloom and the main flow. When the season is fairly started, the bees are given an abundance of room, and the way they go to work in the supers is astonishing. They gather about 65 pounds of comb honey per colony during a good season, and several times I have had a few colonies which doubled the amount. All of this honey is gathered during the short period of about four weeks, after which there is just enough honey coming in to fill the hives nicely for winter.

Comb honey is the chief product of the city apiarists. It can be produced as one of the very best articles, or one of the very worst, just by the length of time it is left on the hive. If the bees are closely watcht, and the sections taken out as soon as they are finisht, the combs have the most beautiful, snow-white appearance, but if they are left on until the end of the season, the combs almost rival the appearance of some old brood-combs.

Extracted honey is produced by some, but the honey in this form is generally dark, and does not find as ready sale as that in the comb. The only advantage of producing the honey in this form is the increase in the surplus, and that the bees can be kept from swarming by transferring all the combs except the one with the queen to the upper story, and filling the lower story with empty combs or foundation. This is a very good plan when one is compelled to be absent from home all day, which is generally the case with many city bee-keepers. This plan certainly does avoid having many swarms which would otherwise stray away before they could be hived.

The city bee-keeper has no trouble in selling his surplus honey. The people are suspicious of all honey sold at the groceries, and often come to me and say: "I like your honey because I know it is pure, and it tastes different from that which I get at the store." I suppose they like it, and know it is pure because they see me remove it from the hives. This is one of the best ways to advertise your honey when you live in a densely populated section. I find it works every time.

Extracted and comb honey sells for the same price. Some would rather pay more for the extracted honey, but I am satisfied to sell it at the same as the comb.

The bees are all wintered on the summer stands, and have very little protection, which consists chiefly in a piece of burlap and a straw mat, or 3 or 4 inches of carpet placed over the brood-frame. This is prevented from coming in contact with the frames by pieces of wood placed crosswise so there will be a space of about 3 inches in which the bees cluster, and also use as a means of access to the other combs.

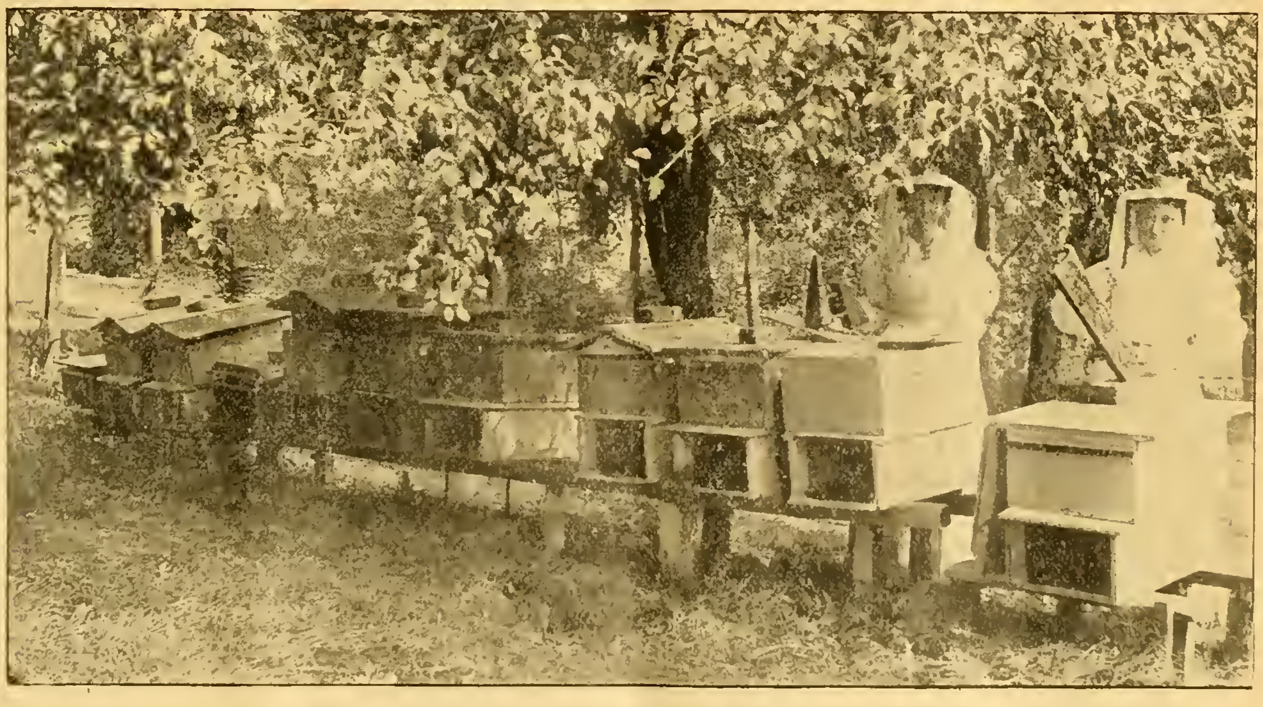
One bee-keeper gives his bees no protection whatever. He winters them on 10 Langstroth frames, which contain about ⅔ sealed honey, and covers these with three ¼-inch covers, which often do not fit, leaving large openings through which the warmth may escape. Strange to say, these bees go through the winter without any loss, and many colonies are just as strong in the spring as those which received the best of care. Last winter one of the colonies wintered without the three ¼-inch covers, the combs being entirely exposed on the top, the rain and snow being kept out by an ordinary empty extracting-super upon which was placed a ventilated cover raised about two inches to let the moisture escape. I think this proves beyond a doubt that bees do not freeze, but starve to death, as the thermometer several times registered below zero, and for weeks it was almost as cold.

Hamilton Co., Ohio.

Peddling Honey—Not Favored by All.

BY ADRIAN GETAZ.

Mr. Thompson, some time ago, related his experience in peddling honey from house to house, and attributed his failure to his lack of ability. Well, I am not sure that his lack of ability was the cause of his failure—too many other circumstances have a bearing upon the question. A good deal depends upon the class of people living in the city. Workingmen and employes generally have little money at home, buy on credit, and pay when pay-day comes. The time of the year has a great deal to do with the selling. During the fair season so much fruit and vegetables of all kinds are on the market that there is but little demand for something else. In the winter, when nothing but meat and potatoes, almost, so to speak, are to be had, then honey for a change is welcomed. Again, during the latter part of the summer the farmers bring all their honey and sell it for whatever they can get. Many families buy what they think they will need during the year, and thus take advantage of the low prices. Many times, however, their calculations are short, and they are "out" before the winter is over.



An Apiary in the City of Cincinnati, Ohio.

If I were to start peddling at this time of the year, right here at home in competition with all the good things that are on the market, and the tubfuls of masht combs brought by the mountaineers, I would meet with a worse failure than Mr. Thompson did. On the other hand, if I started in the winter, say after the middle of January, I would not have any trouble in selling any amount of honey that way.

Most of my peddling, however, has been done by the lady who owns the place where one of my apiaries is. As she peddles her farm products all the time, and has a number of regular customers, it is easier for her to dispose of it than it would be for me, that is, when the peddling is done regularly all the year around. Besides, the cost of time is reduced considerably, as she would have to go anyhow to dispose of her own farm products.

Taking all into consideration, I am not much in favor of peddling. It takes too much time compared to the amount sold, and the difference between the price obtained and the price paid by the grocers is too small to make up for the time lost. As I have said before, I prefer to sell directly to the grocers, either on commission or straight sales, whichever they like the best.

Knox Co., Tenn.

Bee-Chat, or Various Notes and Comments.

BY HERMAN F. MOORE.

Bee-Keeping in Cuba.—I notice that O. O. Poppleton makes some references to his bee-keeping experiences in Cuba that are intensely interesting. Among other things, that he kept 400 colonies, etc. Now, Mr. Poppleton, take this for a subject, "Bee-Keeping in Cuba as Seen by One of the Bees," and open wide up and give us all the details, such as you know will interest all bee-keepers, and especially now when Cuba and her possibilities as an American State are in the world's eye.

Honey-Prices Compared.—It will be interesting at this time to compare the prices of honey that obtained in 1890 with the current prices of the last two years. In June, 1890, Mr. Burnett said there was less honey on the market than any time for seven years, and quotes "choice at 13 to 14 cents."

In July, a Kansas City commission merchant prices "very nice white one-pound sections put up in handsome 12-pound white wood packages at 15 to 16 cents."

The latter part of July a Columbus, Ohio, dealer said: "Honey is scarce, and selling at 17c. for choice white clover."

In September, an Albany, N. Y., commission merchant quoted, "white, selected, 18 to 20 cents."

In September, Mr. Burnett said: "Comb is now held firmly, and sales are now being made at 17 to 18 cents for best grades of white."

In an October number of a bee-paper I see this advertisement: "For sale, 25,000 pounds of the finest honey in scant one-pound sections in 12-pound cases, a very fancy lot. The price is 20 cents a pound on board cars here. Who wants the lot?"

In November the Columbus, Ohio, dealer said: "Honey is scarce and in demand at 18 to 20 cents for nice white clover."

December 15, 1890, the Roots quote as follows: "White sage, one to three 60-pound cans, 11 cents a pound. Choice white comb 1-pounds, one to three cases, 20 cents a pound."

Can we draw a moral from these prices that prevailed in 1890, nearly twice as much as producers obtained in 1896 and 1897, when they dumpt their crops wholesale on the market? Doesn't it seem as if a better distribution of honey was the answer to all, or nearly all, of the apiarists' troubles? Isn't personal work with the consumer, by as many of the producers as possible, the way to get a big price for our product?

Look at the prices that prevailed in the wholesale trade all over the country in 1890. Didn't a large proportion of the consumers pay 25 cents a pound for their honey?

By a certain statistical table I am informed that there are 300,000 bee-keepers in the United States, and a total production of 100,000,000 pounds of honey. Suppose our population is 75,000,000 persons, and half the people never eat honey at all, this only gives 2⅔ pounds of honey per year to each eater of honey on an average. Doesn't this seem like a demonstration that we should get 30 cents a pound for our honey when properly distributed, if it is as scarce as that? Is there any impossibility in getting at least 20 cents a pound for all the good table honey in the country, if properly sold to the consumer?

NON-SWARMING BEES.—Why can't we get down to some hard work along the line of a non-swarming strain of bees? All seem to agree that to give lots of room and prevent swarming will give the largest amount of surplus honey. I think Mr. Doolittle has written some along this line. Can't we breed by selection, and practice dividing for increase, and in a few years have strains of bees and queens that have almost no desire to swarm, if given abundant storage-room? It would not be well to breed the swarming impulse entirely out, for then the rearing of queens might go with it, except for supersedure.

FOUL BROOD.—The question of foul brood and ways and means of spreading it is becoming a matter of very great interest. Will Mr. McEvoy and Mr. France arise and tell us how to assure ourselves that when buying queens or bees we are not also buying a bad case of foul brood? If it is true, as a certain writer claims, that fully 40 percent of the colonies of the country are infected, it is the most serious matter that confronts us at present. Can we write to the foul brood inspector of a certain State and enquire if he can or will give a clean bill of health to the particular bee-keeper of whom we wish to purchase? One colony or one queen may be the means of ruining an entire apiary. We might require a written guarantee or certificate from any one dealing in bees and queens that they had no foul brood in their colonies. Then in case of a loss there would be a legal remedy if the seller is financially responsible.

SELLING ADULTERATED HONEY.—Should wholesale grocers and honey-bottlers all over this country be allowed to sell adulterated honey with "pure honey" on the label? Of course not; but how to prevent them—ah, there's the rub! In many of the States all that is necessary is to prosecute them under the laws as they exist. In many of the States the only lack is in the enforcement of the law, and not in the law itself.

The associations of bee-keepers, to which must naturally fall the duty of seeing to the enforcement of pure food laws as they relate to honey, may well learn a lesson from the maple sugar associations of Vermont and Ohio in these matters. These associations have been seeing to the amending of the laws and the enforcing of them for years with good effect. In Ohio a pure food commissioner has been selected who gives his whole time for a salary to the work of prosecuting adulterators and examining samples of suspected foods.

The Illinois law is an ironclad law, and yet Chicago is the great hotbed of impure foods of every kind and character on the face of the earth. Look at the law as the Chicagoans have it laid down to them in the statutes:

CRIMINAL CODE OF ILLINOIS.

"SEC. 473.—No person shall *mix*, color, stain or powder any article of food, drink or medicine, or any article which enters into the composition of food, drink or medicine, with any other ingredient or material, whether injurious to health or not, for the purpose of gain or profit, or sell or offer the same for sale, or order or permit any other person to sell or offer for sale any article so mixt, colored, stained or powdered, unless the same be so manufactured, used or sold, or offered for sale under its true and appropriate name, and notice that the same is mixt or impure is markt, printed or stampt upon each package, roll, parcel or vessel containing the same, so as to be and remain at all times readily visible, or unless the person purchasing the same is fully informed by the seller of the true name and ingredients (if other than such as are known by the common name thereof) of such article of food, drink or medicine at the time of making sale thereof or offering to sell the same."

"SEC. 475.—Any person convicted of violating any provision of any of the foregoing sections of this Act shall, for the first offense, be fined not less than twenty-five ($25) nor more than two hundred dollars ($200); for the second offense he shall be fined not less than one hundred dollars ($100), or more than two hundred dollars ($200), or confined in the county jail not less than one month, nor more than six months, or both, at the discretion of the court; and for the third and all subsequent offences, he shall be fined not less than five hundred ($500), nor more than two thousand dollars ($2,000), and imprisoned in the penitentiary not less than one year, nor more than five years."

What a rattling of dry bones would there be, my countrymen, if an organization with grit and money should take up the prosecution of adulterators under such a law as that!

Some think a National law is the only thing that will fill the bill. The way to get a National law, and get Uncle Sam to enforce it, is to enforce the local laws, and so educate public sentiment that a general law covering the whole country will be demanded.

This is "the land of the free and the home of the brave," and I for one demand the freedom to know absolutely what is in everything I buy out of the store or elsewhere. If salicylic acid is used in my corn and tomatoes, I want to know how many grains to the quart. If oats is in my pepper, I, who pay the bill, have a right to know what percent. If my honey is part glucose, I the consumer have a right to know whether one-fourth or three-fourths, and so on through the list.

If the names of all the ingredients are printed on the outside of a package I can spend my money for it or not, as I choose; but to label a can "pure pepper" when half is something else, or "pure honey" when part is glucose, is a fraud, and is a lie and a theft, if I part with my money for them supposing them to be *pure*.

The one great reason why those interested in bees move so slowly toward any given point is that so few of them realize the importance of association and combination. Suppose 300,000 are keeping bees in the United States. Not more than 25,000 of them take a bee-paper, and not more than 2,000 are members of an organization to forward bee-keepers' interests. Let the apiarists combine, as do the brewers, the dairymen, the grocers, and others, and there is hardly any result that cannot be attained, that is for their interests.

Cook Co., Ill.

Boiling Foul-Broody Honey for Feeding.

BY DR. C. C. MILLER.

The following paragraph appears in the Bee-Keepers' Review for September:

"Dr. Miller, to the question, Could I safely feed it [honey from a colony having foul brood] by boiling? replies: 'Put water with it, bring it to a boil [sic], then after it comes to a boil [sic] *keep it boiling for two hours and a half.*' The Italics are his. Was the Doctor in a playful mood? That would be hard on the bacilli unless plenty of water were added. I consider 15 minutes boiling sufficient; having first added an equal amount of water."

I wish I knew what Mr. Taylor means by that word "sic." Coming as it does twice after the word "boil," it looks as if he might be objecting to the use of that word, but as I know of nothing incorrect in the word, or the way in which it is used, I shall be obliged to him if he will tell what he means by saying "sic."

Mr. Taylor says: "I consider 15 minutes boiling sufficient." I might reply, "I do *not* consider 15 minutes boiling sufficient." Pitting one statement against the other, the first has by far the greater weight, for Mr. Taylor knows vastly more than I do about foul brood, and it is right that I should give some reason for insisting on more than 15 minutes boiling.

Dr. Wm. R. Howard, in his pamphlet on "Foul Brood," reports some experiments upon the point in question. Tubes of liquid gelatine containing spores of bacillus alvei were placed in an open vessel of boiling water. The contents of a tube thrust in boiling water would of course come very nearly to a boil. The spores were not all killed until after 45 minutes. Dr. Howard's concluding words on this point are "that boiling for an hour would destroy their vitality."

Still later I saw a report of experiments upon the same point. I am sorry to say I cannot say where, but I think they were experiments made under the auspices of the Canadian government, and reported in the Canadian Bee Journal. If my memory does not play me false, spores grew after being kept at the boiling-point nearly two hours and a half.

Under the circumstances I would not feel justified in advising less than 2½ hours boiling. Even if 15 minutes is sufficient, 2½ hours is still safe, and Dr. Howard's experiments lead to the belief that in at least some cases 15 minutes time is not sufficient.

McHenry Co., Ill.

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The Queen-Excluder and Its Inventor.

BY F. GREINER.

In his Straws for July 15, Dr. Miller makes mention of the inventor of the queen-excluder, Fr. A. Hannemann (wrongly spelled Hahnnemann). This brings to my mind vividly what Mr. H. wrote in the German papers during the years 1875, '78, '79, about this invention and the general management of his bees; and altho about 20 years have past since then, what he said may still be of interest to the readers.

If my memory serves me aright, nothing has ever appeared in relation to the subject in our bee-literature here, so I will speak of Mr. Hannemann, try to give the essentials of his management, and mingle with it some facts and the experiences of others as opportunity may present.

When Mr. Hannemann wrote his last report for the Bienen-Zeitung, in 1879, he was then a bee-keeper of 30 years' experience. He had made a specialty of apiculture for 26 years in the extreme southern part of Brazil; had introduced our common honey-bee into that land, and was the originator of modern bee-keeping there.

I did not know that, according to Dr. Miller, Hannemann was a tailor by trade; but it is very evident that he could not have had very much leisure to follow his profession, for he was so extensively engaged in bee-keeping and honey-production that his breeding-stock numbered over 300 colonies, which were allowed to swarm at will. From what I have read on and between the lines it would seem to me that all these colonies were kept in stationary hives, perhaps box-hives, as we call the hives without frames. Hannemann's aim was, in the first place, to have his colonies swarm all they would, and that was all he expected or askt of them. He called them his stock capital. The young swarms were the interest, so to speak, to be exchanged for honey during the honey season. The *how* will be shown later on.

Southern Brazil must be well adapted to bee-culture. Hannemann spoke of his honey season as lasting from two and a half to three months. For six weeks the secretion is so plenteous that bees will not work on any honey offered them in the open air. I think we might be able to show something with such a honey-flow. I have not seen a day like that here in several years, even when I secured a fair yield.

The queen-excluder was invented or gotten up for a different purpose from what we use it for now. Hannemann may have been led to make his invention on account of many young swarms often going together when swarming at the same time, and he wanting to make a sure thing of it to catch all the queens. At any rate, he constructed a sieve with the view of sifting his bees before hiving them, and so the appliance has been named "Hannemann's bee-sieve." In sifting his bees he probably encountered the difficulty of getting the drones and queens mixt together in a heap; and the gain by using just the queen-excluding plate proved insufficient for the accomplishment of his object, so he added another sieve having wider passages, with space between the two. This workt well. It separated and secured queens and drones, allowing the workers to pass through. The latter were hived in the peculiar mammoth hives to be described further on, the drones destroyed, and the queens confined in cages of his own construction.

This brings us to the second use of the queen-excluding metal, for these cages were made of *such* (I wonder that the excluding metal has not been used for this purpose by some of our bee-keepers who practice caging during the honey season). Hannemann wanted his queens caged so as to allow the bees to communicate with them unhampered, hence he made the cages of perforated metal. The unique manner of his management of the young swarms made it strictly necessary to have *every* queen secured. If possible, all the swarms coming in one day were placed in *one* single mammoth hive. Mr. Hannemann speaks particularly of one day in 1879, when he had 79 swarms issue, to be taken care of by himself with the help of his three young children, to be sifted, queens caged, and the bees weighed and hived. One giant hive and two barrels accommodated this enormous "pile" of bees. They gave at the end of the season, net, about 1,600 pounds of honey.

Mr. Hannemann speaks at another time of his "Boss Giant hive" of 50,000 cubic inches, made four stories high, cupboard fashion, with eight hinged doors in the rear, to give access—a hive that harmoniously accommodated 54 kilograms of bees (about 119¼ pounds) from which he harvested, at the close of his 2½ months' honey season, 448 kilograms of honey (equal to about 987 pounds), and 38 pounds of wax, reckoning a kilogram as 2 1/5 pounds. In other words, one or each kilogram of bees was exchanged for 8¾ kilograms of honey. Of the 14 caged queens but 9 were alive when the honey was *cut* out.

In 1879 Mr. Hannemann had to take care of 700 swarms (young) in two months. His entire crop amounted to 15,428 pounds of honey, and 1,212 pounds of wax. He stored his honey largely in cemented vats or cisterns. It is astonishing, so adds Mr. Hannemann to his report, to think that so much honey could be produced in one locality, especially when taking into consideration the fact that over 300 breeding colonies used large but (of course) unknown quantities for breeding besides, and storing their winter supplies at the same time. I would add, it goes to prove that Hannemann has a splendid location, perhaps like California or Cuba, altho he says that the *slipshod* bee-keepers complain that bees do not pay any more.

The publication of Hannemann's system created a great stir among the German bee-keepers at the time—probably more on account of the novelty of it than for any other reason, altho, of course, we all appreciate the queen-excluder. I have not heard of any one in Germany who practices the Hannemann system as he did. Mr. H. Guehler, after several years of trial, thinks but little of the excluder for his locality, but values highly the queen-cage constructed *a la* Hannemann. He workt out this system: When the honey season is nicely begun he confines the queens in Hannemann cages, and places them on top of the brood-frames with super, or, as they call it, "honey-chamber," above. The bees, he says, immediately take possession of the super, providing honey is coming in.

When we cage a queen in the brood-nest in an ordinary wirecloth cage, the bees behave but little differently from what they do when the queen is entirely removed. They almost always construct queen-cells over larvæ, and the progress in the sections is slow, if, indeed, any work is done at all. This is according to my experience. But when a queen-cage of the Hannemann order is used, and the bees can communicate freely with the queen, they do not seem to be aware that she is caged at all, and Mr. Guehler finds that everything moves along in the hive normally. Queen-cells are not constructed. The combs become heavier and heavier, and the work in the super—that is, comb-building and honey storing—goes right on unless the honey-flow ceases. Guehler thinks it is best to release the queen again after two weeks of confinement, removing at the same time a few of the heavy combs from the center of the brood-nest, inserting comb foundation in their stead. Empty comb does not prove to be a success, as the bees will fill in honey too soon. The bees will draw the foundation into comb just about as fast as the queen can utilize it, and she will at once be ready to enter upon her maternal duties as if she had not been obliged to suspend her work. The bees very readily accept their queen, for in reality they have never been separated from her. Guehler finds that queens come out uninjured by this confinement, prove to be just as fertile, productive, and long-lived as if they had always had their freedom. When carrying the caging plan to excess—that is, confining the queen for an unreasonably long time (in this one case he speaks of, it was five weeks), laying workers made their appearance.

It seems, then, that some German bee-keepers modified the Hannemann system to suit their own environments, or pickt out the valuable features according to their own judgment. I noticed, also, that after the publication of Hannemann's invention queen-cages like this were offered for sale. They consisted simply of a little wooden frame covered with the perforated metal on each side.

Right here I want to add that some of our German friends across the water have adopted at least some features of *our* methods, our hives and appliances, owing in a great measure, probably, to the efforts made by Mr. Stachelhausen, of Texas, and myself, to enlighten them on the subject of American bee-hives and our general management of bees. Of course, progress is slow. It seems very hard to give up old methods and adopt new ones. But progress is there. My private correspondence with bee-keepers of Germany establishes that fact beyond a doubt.—Gleanings. Ontario Co., N. Y.

[Concluded next week].

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A Little Experience with Bees.

BY CHARLES HOOKSTRA.

I have had quite an experience with bees lately. I went southwest of my home about six miles, and got acquainted with three or four persons who keep about 50 colonies of bees. They are not readers of the bee-papers, and are somewhat behind the times in the latest improvements.

A man came along there about five or six years ago and sold them some newly invented hives, charging them $5.00 apiece, and they have made no improvements since then. They keep most of their bees in dry-goods boxes, or any box that is convenient when they swarm. A great many go to the woods and are lost.

In the fall, about Oct. 1, they dig a hole in the ground, build a fire and put sulphur on it, then place the hive over the fire to kill the bees in order to get the honey away. I persuaded them this year to let me have the bees and take them away without killing them. I now have two colonies at my home which I took away from the honey they had gathered all summer. I first bored some holes in the box they were in, enough to put the nose of the smoker in; then I turned the dry-goods box bottom side up, and put my hive on top of that, with foundation in, and a cake of honey. I then rapt on the dry-goods box to get them started going up, and I gave them a puff of smoke. I kept this up for about 25 minutes, until I had them pretty well up. Then I placed the hive in the place where the dry-goods box stood, and moved the box away about 50 feet, and the remaining bees I drove out with the smoker, when they flew to the new hive where the queen was, and the work was done.

I let them stand there the next night and day, and the evening of the next day they had started to work. That evening I fastened the hive to the bottom-board, and put mosquito-netting around it and brought them home on the street-cars. I put a paper on the box, and the passengers wanted to know if I had pigeons. I told them I didn't know how many "pigeons" were in the box. I had only to change cars three times with my "pigeons."

I have had the bees at my home two weeks, and they have gathered 30 pounds of honey in the brood-chamber already, and I consider them one of my best colonies. This was a new idea to the bee-smotherers.

Another person gave me a third swarm that was very small. It issued Aug. 21. I took them out of their dry-goods box or "bee-catcher," as the man called it, as it had a handle. They had made quite a bit of comb, being in there three days. I took a wire hive made of screening, and took the little piece of comb that the queen was on and put it into my hive. The other bees I shook into my hive, and brought them home on the street-cars. When I got them home I put them into one of my hives with foundation with a little honey in. The next day I saw they were not strong enough to gather enough honey to keep them this winter, so I took one of my strong colonies and put it beside the weak one, and put peppermint on both hives so as to kill the scent, so they would not kill the queen in the weak colony. I then took a frame of bees out of the strong colony and shook them into the weak one. This workt all right. The next morning I fed the new colony honey so they would get a little acquainted with their new home. It is now the third day I have had them, and they are gathering their winter stores. I now have a pretty strong colony of bees. I believe in saving the last swarms if increase in numbers is wanted.

About two weeks ago I visited Mr. Watson's home, in this (Cook) county, alongside the Desplaines river. It is a beautiful home, surrounded by a natural growth of trees. I had quite a talk with Mrs. Watson about bees. She said they had some "tenants" in the upper part of their house that had not paid any rent, nor had they received any benefit from them for the last four years. The "tenants" are a swarm of bees. They came in between the stone wall and the window-frame in the upper story at the front of the house. They came in a small crack that the builders had left. They then found their way to the inside of the house between the plastering and the stone wall, in a space about 3 inches wide and 10 feet square, which is their hive. When the lady of the house opens the window in the room below the bees come down the pulley holes, and act as if they would like to take possession of the whole house. The people considered the bees quite a curiosity at first, but they do not think so now.

These bees swarm regularly every year, but the people have not been able to catch any of the swarms. The bees have made the corner of the window-sill black by traveling in and out. There are about 50 colonies in that vicinity, and the bees in the house are supposed to be some of the runaways. Cook Co., Ill., Aug. 28.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Keeping Combs Filled with Honey.

I have a few extracting-combs filled with honey, and want to keep them for the bees in early spring. How can I keep them away from the bees? In what kind of a room, and what temperature is required? NEW YORK.

ANSWER.—Very likely a warm cellar is the best place you can conveniently have. If you can have a warmer place, all the better. But a cellar that never freezes is better than a room that is much warmer than the cellar in daytime and then freezes at night. The best thing would be a room that never goes below summer heat. It would not hurt the honey to be kept at 90° or 100°.

Sources of Pollen.

Where do the bees get their pollen and bee-bread—from what flowers or shrubs, and what kind of trees and flowers? The reason this question is askt, I would like to plant them, and it would be of interest to me as a beginner. GEORGIA.

ANSWER.—Bees get pollen from white clover, burdock, sweet clover, plantain, buckwheat, maple, pumpkin, apple, muskmellon, poppy, plum, corn, linden, dandelion, mignonette, pear—I think you'll have to excuse me from giving the whole list, for it would take up a great deal of space to give all I know, and very likely your bees get pollen from something I don't know anything about. It is not likely that it would be worth while for you to plant anything specially for pollen. While it is a very important item in Mistress Bee's bill of fare, the probability is that your bees will easily find all they want on the plants already growing.

Work of Wax-Worms—Queenless Colony.

1. Three weeks ago I had a strong colony of bees to abscond, leaving plenty of sealed brood. After the young bees gnawed through, they could not get out, as they were held in by a web at the bottom of the cell where there was a small white worm. The hive was well shaded, and the bees were bringing in nectar. Ants have been between the quilt and cover for some time. I put them into a new hive on full sheets of foundation, and they are doing nicely. What caused them to leave? How can I prevent it, and get rid of the small worms?

2. I notice white dust, or what seems to be chewed wax, on the sections of honey that I have stored away in a warm, dry place. What is the cause, and how can I prevent it?

3. I have a colony of queenless bees. I gave them a frame of eggs and larvæ, and instead of starting queen-cells on it, they build queen-cells on the comb where there are no eggs or larvæ. If they adopt a worker-bee as a queen, will she lay eggs? What must I do with them? TENNESSEE.

ANSWERS.—As you report the case, it seems to have been a case of swarming, in which the worms and ants had no part. The best remedy for the wax-worm is a strong colony of Italians. Italians seem to be very much better than common bees for keeping out worms. The ants probably do little damage, making their nests about the hive more for warmth than anything else. If no place is allowed about the hive to shelter them where the bees cannot go themselves they will not trouble. I discarded quilts and adopted a plain board cover.

Since then ants don't bother at all, for they have no chance to find a hiding-place from the bees.

2. The white dust is the work of wax-worms that are very small and young. Give them time enough and they'll grow into big, fat worms. Better fumigate the sections with sulphur.

3. Your colony has probably been queenless for a long time, and by this time laying workers may be at work. It is so late in the season that your wise course will be to break up the colony. Indeed, that is the best way at any season, after they have been queenless a long time. If you have a weak colony that has a good queen, you can give it to the queenless colony to strengthen it. If you have no very weak colony, divide the combs and bees around among several colonies that are among your weakest.

How Bees Get Home Again.

I would like to know what Dr. Miller thinks of the following paragraph, taken from a newspaper:

"Bees are said to see an enormous distance. When absent from their hive they go up in the air till they see their home, and then fly toward it in a straight line."

MICHIGAN.

ANSWER.—I don't know anything about it, but I don't believe it. I have a dim suspicion that a bee, bird or animal may have some sense that a man doesn't have. Take a cat and put it in a bag, carry it by a circuitous route farther from home than it has ever been, liberate it, and when you get home you may find it smilingly waiting to greet you at the door. With any sense that you have, you couldn't do a thing of that kind. Hasn't the cat some special sense that you haven't? A carrier-pigeon will find its way home a hundred miles, in a place where it couldn't see half way home. I have some doubt whether a bee is as good as a cat or a pigeon at finding its way home, and it's possible that it finds its way home only as you do. At any rate, if you take a bee five miles from home, in a direction it has never before gone more than a mile, I doubt whether it would find its way home, even if its home is so plainly seen at that distance that you can see it with the naked eye. So I don't have so very great faith in the extra sense belonging to a bee, after all; and when you come right down to it I don't know anything about it.

Cellar-Wintering—Ventilation—Extracting-Frames—Quilt or Board Covers.

1. Can I winter my bees in a storm-cellar? It is 8x12 feet, depth 6 feet, and 1½ feet of earth on top.

2. What is the best way to fix ventilation?

3. Which is the better frame for extracting, 9⅛ or a half-depth?

4. Which is the better, a quilt or a board over the frames? I use boards, but the bees glue it.

MINNESOTA.

ANSWERS.—1. Very likely it will be a good place to winter, but you can hardly be sure about it till you try. The lay of the land makes a difference about its being damp, etc.

2. For only a few colonies it may need no attention as to ventilation. You can secure ventilation by having a pipe run from near the bottom up through the top, covering so no rain can get in, but still leaving free passage at the top for air. You can make the pipe by nailing together four fence boards, altho very likely a smaller pipe, say three inches square, will be probably as large as is needed. If there is a pipe running up high enough to act like a chimney, there will probably be no need of any special provision for letting in air. Enough will work in through the cracks and the soil.

3. In a late number that question was pretty fully answered. The shallower frames are considered better for extracting, but the deeper frames have the advantage that you can afterward use them for brood-frames if you wish.

4. The tendency nowadays seems to be in favor of board covers without quilts. The bees glue the covers down, but by using a sharp screw-driver or some other hive-tool you can easily pry them up.

Will they Winter?—Refuse to Work in Supers.

1. In June I hived a small swarm in a frame hive, giving them four frames. They went to work all right but did not breed up fast. In August I put in another swarm, and the four additional frames, and now these frames are full of honey and very little brood—virtually none. Still they have never stored any honey in the super. Will they winter all right without any young bees? or ought I to take away the frames filled with honey and give them empties?

2. I have four or five colonies that have refused to work in supers. Do you know a remedy?

TEXAS.

ANSWERS.—1. Very likely it will be just as well to leave them as they are. Of course, if the frames are so full of honey that the queen has no room to lay, then it might be well to exchange one of them for an empty one. But if you find any empty cells in the hive, or if you find brood in two or three frames, better let them alone. Queens do not generally lay a great deal after this time of year.

2. It may be that the harvest is poor. In that case it is hard to apply a remedy. If, however, other colonies are working well in supers, and these colonies have their brood-nests entirely filled, you may get them to working in supers by using bait combs. Put in the center of the super a section that has been partly drawn out. One good way is to take from a super in which bees are working well a section ¼, ½, or ¾ filled, bees and all, and put it in the super in which you want the bees to work.

Unfortunate Jumble—Drones and Egg-Fertilization.

Referring to page 438, Hon. R L. Taylor says this in the Bee-Keepers' Review:

> "There is apparently an unfortunate jumble either of the questions or of the answers, but that is not entirely clear, as one of the questions is evaded. Will the doctor please straighten out these things?"

I read over the questions and answers on page 438, until I came to the last one, "Drones and Egg-Fertilization." When I came to that I didn't wonder Mr. Taylor wanted it straightened out. But after trying it for some time I concluded I must be excused from the task. I will now, however, give the information called for in the questions, thanking Mr. Taylor for calling attention to the jumble:

Dzierzon taught that the eggs that produce drones are unfertilized. This teaching, bitterly assailed at first, has come to be generally accepted the world over. Lately, however, a small school across the water holds that all eggs are fertilized.

A difference of opinion prevails as to whether the fertilization of the egg is voluntary or involuntary on the part of the queen, the prevailing belief, perhaps, being that it is voluntary.

C. C. MILLER.

Honey as Food is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey among should-be consumers. The forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 30 cents; 50 for 50 cents; 100 for 90 cents; 250 for $2.00; 500 for $3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for $1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at $1.00), and 10 cents extra.

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

☞ See "Bee-Keeper's Guide" offer on page 621.

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Omaha Convention Report we expect to begin next week—with the first number of the Bee Journal for October. We are expecting a good report. The convention papers we think were exceptionally interesting and valuable. We presume there will be sufficient convention material to run in our columns almost the whole of the next three months. Every member of the United States Bee-Keepers' Union will receive the Bee Journal containing the convention report in full. The Board of Directors of the Union arranged for that before leaving Omaha. There were four of the six Directors present.

◆

City Bee-Keeping is the subject of the first article in this week's number. Mr. Schmidt refers mainly to the keeping of bees in or near the city of Cincinnati, Ohio. Within the city limits of Chicago are found many apiaries, some quite large, but of course the majority are small. They range, perhaps, from one colony up to a few having over 100 colonies.

Some fairly good yields have been secured from colonies kept in cities. Last year one colony in our own small apiary here in Chicago, produced 150 well-filled sections of honey—gathered from sweet clover. Colonies in other apiaries here may have done better, possibly.

If bees are properly handled, there need be no fear that they will molest near neighbors. Of course the inevitable mischievous boy will find the bees if any are around, and then usually the trouble begins. But it will likely also end right there, if said boy experiences fully the sitting-down qualities of a healthy worker-bee. Such an impression is generally lasting. A boy may forget many things, but ever after being successfully pierced by a bee-sting he remembers it with great vividness whenever he finds himself again near any bees.

While it would not be well to encourage city bee-keeping to a great extent, still if kept within reasonable bounds much good will result therefrom to those who manage their bees in a proper manner.

◆

Who is Responsible?—Referring to an item in the department of "Beedom Boiled Down," which mentioned that the Department of Criticism in the Bee-Keepers' Review was almost entirely given up to controversy between the critic and Dr. Miller, Critic Taylor says:

> "I wonder who is responsible for 'Beedom Boiled Down.' The style seems strangely familiar. The writer ought to stand out squarely and meet the result of his statements. Anonymous publications are never lookt upon with much favor."

Mr. Taylor is too intelligent a man to admit the thought that he is not familiar with current journalism, and it is only through mere thoughtlessness that he could have made such a remark. If he would stop to think, he would know that in his favorite daily newspaper he reads many things without signature, written by the editor, or by some one employed by him, and if he calls such writings "anonymous," then the ablest part of our ablest journals is anonymous.

The American Bee Journal stands just as responsible for "Beedom Boiled Down" as for any other editorial matter.

◆

The Department of Criticism, in the Bee-Keepers' Review, the editor says, has been praised by some and condemned by others. One subscriber thinks the critic should be a critic in the fuller sense of the word, giving praise as well as blame. The editor says what he wanted in the department was to have errors and fallacious ideas pointed out, and where possible better plans to be given in place of the ones condemned. He now asks advice of the friends of the Review as to whether the department should be continued as at present or changed.

◆

Shall We Grow Sweet Clover?—This question is the heading of a contribution in the Orange Judd Farmer, by Prof. L. H. Pammel, of Iowa, written in response to a sample of sweet clover sent to him. He replied as follows:

> The specimen is of common sweet or Bokhara clover (*Melilotus alba*). This weedy annual is a native of Europe, and has become widely naturalized in portions of the United States, especially so in the States of Ohio, Michigan, Wisconsin, Illinois, Minnesota, Iowa and eastward. It resembles alfalfa, but is easily distinguisht by its taller habit and larger leaves, growing from three to eight feet high. Its flowers are small and white. This plant is a nitrogen-gatherer, produces a long and deep taproot, and hence is very valuable as a soil renovator, especially in the South. It thrives admirably upon the thin calcareous soils of the Southern States, but it is especially valuable on the old wornout prairie soils of the Cotton States.
>
> It is equally valuable as a soil renovator in the North, but the question arises, Should it be cultivated in lieu of better forage plants? A soil in the North on which this weed grows is not only rendered fertile, but is made very porous. The strong odor of this grass renders it objectionable to cattle and stock, but they later become accustomed to it. J. G. Smith says: "But if they are turned into a field of sweet clover in the early spring, before the other clovers come up, they will quickly learn to eat it." To obtain best results in this latitude, the seed should be sown in February or March at the rate of about one-half bushel to the acre. A crop can be cut the first season.
>
> This plant is very valuable as a honey-producer, and where it is abundant bees collect large quantities of honey. In all probability no other plant in this latitude yields as abundantly as this since the basswood and other native plants are rapidly diminishing. It is able to resist the drouth to a remarkable degree. Another point in its favor as a honey-producer is that the plant blossoms from June to frost. If

your soil is sandy your sweet clover will thrive upon it. If the soil is heavy it is also suited to this splendid plant. If the season be wet sweet clover will blossom and grow freely, and if dry its bountiful and continuous yield of honey will well repay the slight trouble incurred in planting, and your bees will be kept busy and happy all the season. The point to determine is whether it is desirable as a forage plant in the northern latitudes. If its forage qualities outweigh its woodiness then it should be tolerated. Does the farmer need it as a bee-pasturage plant? He must determine all these points largely for himself. It has undoubted virtues in several directions.

We are glad to note in the foregoing that Prof. Pammel is becoming less severe than awhile ago when he condemned sweet clover so strongly. We see, however, that he still calls it a "weed." Well, some day he'll get over even that, we think.

His recommendation of sweet clover as a honey-plant is all that could be desired, and is also entirely just and right. But we believe many advise sowing the seed in the fall as well as in early spring. We should be pleased to have some advice about fall sowing, from those having experience.

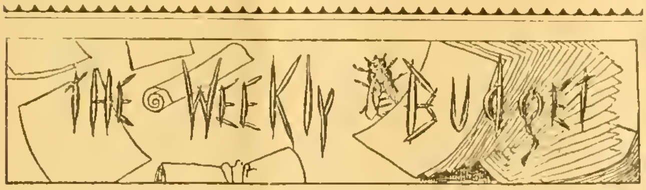
Death of Miles Morton.—We learned at the Omaha convention that Mr. Miles Morton had past away on Sept. 1. Upon our return we received the following from the Secretary of the local bee-keepers' association, of which Mr. Morton had been a member:

> The Cortland Bee-Keepers' Association, at a regular meeting held at Freeville, N. Y., Sept. 8, past the following resolutions:
>
> WHEREAS, It has pleased God in his wisdom to remove from our midst our brother, Miles Morton; therefore, be it
>
> *Resolved*, That we, the Cortland Union Bee-Keepers' Association, do extend our most heartfelt sympathy to the bereaved family in their hour of sorrow; and that we express our appreciation of his help and counsel in the past, as well as our sense of the loss to the Association in his demise; and be it further
>
> *Resolved*, That a copy of these resolutions be publisht in the American Bee Journal. J. L. KINNEY, *Sec.*

We remember Mr. Morton very well, as we met him at the Buffalo convention last year, and it is with sincere regret that we learned of his death. Our sympathy is hereby extended to the bereaved ones, who are left to mourn his departure.

Chiefly from Mr. Morton was the idea of the fence separator obtained, he having had fences in use for 12 years past. He was an intelligent, unobtrusive sort of man, highly respected by those who knew him. We hope soon to be able to publish more about him, and also his picture.

Northern Michigan as a Honey-Field, Editor Hutchinson thinks will be an ideal location for years to come, largely on account of the willow-herb or fire-weed that grows on places where the timber has been burnt off. He cautions, however, any one who may think of locating there, and has been accustomed to the advantages of civilization, to remember that it is a *new* country.



BARON BELA AMBROZY reported at the big German convention last year that, by feeding honey with 50 percent water, and afterward with 30 percent, he got no satisfactory results; but using pure honey he got 3 pounds of comb for every 4 pounds fed. Doesn't that differ from reports in this country?—Gleanings.

MR. R. H. LEE, of Ashland Co., Ohio, writing us Sept. 11, said:

"Go ahead with your spelling reform. I am a little old to adopt it myself, but I like to read it. To quiet some of your critics, you might print the Lord's Prayer in a number of versions, from the earliest translation to the present, showing the changes in spelling. And, by the way, please be careful to print that grand old prayer according to the authorized version, for very few seem to know it, particularly preachers, and those who lead in religious exercises....This has been a very poor honey-year in this part of the country.'

Why, Mr. Lee, if we should print one of the earliest versions of the Lord's Prayer, scarcely any of our present subscribers could read it. There has been great progress made in reforming the spelling of the English language the past two centuries, and yet there is much more to be done in the same line. We are only aiding a good cause.

RICHARD WAGNER AS HE WAS.—The widow of Richard Wagner, some time ago, authorized her husband's lifelong friend, Houston Stewart Chamberlain, to write, with her assistance, two articles on "The Personal Side of Richard Wagner." Mr. Chamberlain undertook the work, and The Ladies' Home Journal secured the material. The articles are singularly valuable in that they give a complete picture of the man in his home and daily life, and contain much new matter, while many of the illustrations and portraits have never been printed. There will be two articles, "His Personal Side" and "How He Wrote His Operas," and the first one will appear in the October number of the magazine. Music-loving people will be pleased to know more about Wagner—one of the great composers.

MISS ADA PICKARD, of Richland Co., Wis., is perhaps the "sweetest" girl in all Wisconsin, in more ways than one. A local newspaper gave over a column account of her bee-keeping experience this year. In May, Miss Pickard took 100 colonies to form an out-apiary several miles away, and in seven weeks returned with 126 colonies and 16,000 pounds of extracted basswood honey. She cared for them all alone until the time of extracting. Miss Pickard's mother is perhaps the most extensive feminine bee-keeper in the State, having about 400 colonies. As stated in a previous number of the Bee Journal, their total crop of extracted honey this year is about 50,000 pounds.

MR. C. THEILMANN, of Wabasha Co., Minn., wrote us Sept. 19, as follows:

"If Minnesota is counted among the favorite States for this year's honey crop, then honey should bring good prices. I have about one-fourth of a mixt-up crop, and that was the report from all bee-keepers except two at our State fair, and the adjourned meeting on the fair grounds. One of the two reported 50 pounds, and the other 60 pounds per colony, spring count. Both have only small apiaries."

DR. GALLUP, of Orange Co., Calif., wrote us Sept. 19, that he had sold his bees, as his time is devoted entirely to his business of healing people. Altho the Doctor is nearing 80 years of age, we are sure bee-keepers will regret to have him leave their ranks again. But let us hope he'll return again soon, for we all need the presence and help of the older heads with their rich experiences.

EDITOR ERNEST R. ROOT, of Gleanings in Bee-Culture, gave us a short call Monday evening, Sept. 19, when on his way home from the Omaha convention. He was feeling well, and seemed to be enjoying life immensely. He is chairman of Board of Directors of the United States Bee-Keepers' Union, and in every way worthy of all the honors and success attending him.

C. J. H. GRAVENHORST, editor of the Illustrierte Bienen-Zeitung, died at his home in Wilsnack, Germany, Aug. 21, at the age of 75 years. He was one of the very foremost practical bee-keepers and writers on the subject of apiculture among all the Germans. It is a great loss to the bee-keeping interests across the water.

MR. WM. BROBYN, of Weld Co., Colo., wrote us as follows Sept. 12:

"I have taken the 'Old Reliable' for three years, and will not try to get along without it as long as I can raise the necessary $. It comes regularly every Friday afternoon."

BEEDOM BOILED DOWN

Bees Robbing.—P. Pingrenon reports in Revue Eclectique that he stopt a bad case by placing vessels of honey well thinned with water a short distance from the apiary. All was quiet in a short time.

To Keep Ants from Hives.—Stuff cotton-batting in the cracks through which they enter, and the ants become entangled in it. Renew occasionally. Scatter chopt garlic in their runways.—Prakt. Wegweiser.

Breeding for Improvement should be not by crossing bees of different varieties, but by careful and scientific selection among bees of one variety, according to E. A. Daggitt, in Bee-Keepers' Review. He thinks prominence should be given to color and temper in breeding for better stock.

Longevity and Quality of Queens.—The question is raised whether a queen sent through the mails will be as good and live as long as one that has not thus traveled. If travel hurts a queen, will it not be better for each one to rear his own queens? On the other hand, will the average bee-keeper rear as good queens as the experienced queen-breeder?—Gleanings.

Giving Back Combs After Extracting hinders gathering for a day or two, because cleaning and mending the combs costs time and labor, says McIntyre, in California. The reverse is true in our experience. The combs are lickt up in a night, and mending the injured cells is excellent employment for the home bees. Nothing stimulates the bees more to increase activity.—Praktischer Wegweiser.

Doolittle Plan of Queen-Rearing.—The editor of Gleanings is very enthusiastic over rearing queens according to the plan given in Doolittle's book. The plan was tried by their apiarist some years ago and failed. A late trial by the same man was no more successful, but a new man tried it and secured queens of the finest quality. The secret of success seems to be slow feeding all the time cell-building is going on.

Large vs. Small Hives.—"While I believe that for the bee-keeper who has a single apiary under his care, and that at home where it is constantly under his eye, a brood-nest of at least moderate capacity is best, I will admit that possibly for out-apiaries, or under any condition where *neglect* is likely to play a prominent part in the management, large brood-nests may be better than small ones."—Bee-Keepers' Review Editorial.

Prevention of Swarming.—L. A. Aspinwall has entirely prevented swarming in about 50 colonies, the main feature of his plan being that of separating the combs with dummies of peculiar construction. He has taken colonies that have swarmed under the old management, cut out the queen-cells, spread the combs with dummies, returned the bees, and there was no more swarming—the bees going promptly to work in the sections.—Bee-Keepers' Review.

A New Hive is described in Gleanings by W. K. Morrison. The description is not entirely clear, but the hive seems to have no frames, separators, section-holders, or anything of that kind, only plain sections 6x4½x1¼, the sections lying longwise, 33 in the brood-chamber and 33 in the super, the brood-chamber and super being exactly alike. The editor thinks such hives would cost very little, but doubts whether any one would be satisfied to extract from frames 6x4½.

Grading Honey.—The Bee-Keepers' Review quotes H. R. Boardman as opposed to grading honey into fancy and No. 1. After the "fancy" is sold, No. 1 is hard to sell and must be sold at a low figure, and no more can be had for fancy alone than for fancy and No. 1 together. Editor Hutchinson says, "I must admit that I have never practiced these Washington rules for grading. I put the 'fancy' and 'No. 1' all together, and what is lower than these grades I sell to private customers at a reduced price.

Selling-Qualities of Plain Sections.—Messrs. Niver, Aspinwall, and others, have claimed that plain sections would sell better than others. Gleanings gives a case in which the testimony was especially disinterested. The A. I. Root Co. sent a lot of honey to a commission house, one case of plain sections being in the lot. The commission men didn't seem to know what the honey was, but said they had taken an order for two or three cases from every one of their customers who had seen it, and they could use anywhere from 100 to 1,000 cases of honey in plain sections.

Large Hives Aid Prolificness.—C. P. Dadant thinks the size of the hive has something to do with prolificness of the queen. R. L. Taylor, who uses Heddon hives, says not one queen in a hundred will lay 2,500 eggs daily, continuously, for a certain period. Abbe Colin, who used still smaller hives, and who called a hive of the capacity of an 8-frame Langstroth "a hive of great dimensions," says a queen in a strong colony cannot lay more than 600 eggs a day in the good season. In keeping with that, he thinks it useless to use a super of more than 15 pounds capacity.—Gleanings.

Development of Bees.—Dubini gives the following table of days for the different stages:

	Queen.	Worker.	Drone.
Egg	3	3	3
Growth of larva	5	6	6½
Spinning cocoon	1	2	1½
Period of repose	2	2	3
Metamorphosis into chrysalis	1	1	1
Duration of perfectioning	3	7	9
Average from time egg is laid until bee emerges	15	21	24

Dangerous to be a Foul Brood Inspector.—F. Boomhower, foul brood inspector of Schoharie County, N. Y., thinks it about as dangerous to be inspector as to go to battle in war. He says the farmers who keep a few bees are ignorant and careless, and the regular bee-keeper suffers for their slipshod ways. They will insist they have no foul brood when their colonies are rotten with it, and when the inspector comes around they think it is only a scheme of leading bee-keepers to clear out the smaller bee-keepers so as to have a clear field. He has been threatened with clubs, fence-stakes, and shotguns, thinks county inspection doesn't amount to much, the thing needed being a State inspector backt by a good law.—Gleanings.

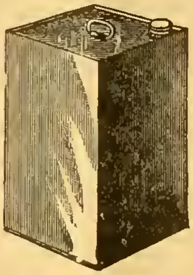
The Laying of Laying-Workers.—There seems to be considerable variation in observations made as to the laying of laying-workers. Critic Taylor, in the Bee-Keepers' Review, quotes Devauchelle as saying laying-workers deposit eggs only in drone-cells; Dr. Miller as saying in drone-cells by preference, and in their absence in worker-cells so the work cannot be distinguisht from that of a queen; Editor Hill as saying that a worker rarely lays an egg on the base of a worker-cell; while in Mr. Taylor's experience a worker generally lays in worker-cells, placing the eggs on the bottom of the cells, but so irregularly that he can distinguish the work always from that of a fertile queen in good condition. Altho neither of them mentions it, possibly all four would agree that a common practice of laying-workers is to lay a plurality of eggs in a queen-cell.

Prevention of After-Swarming.—Critic Taylor, speaking of Doolittle's plan of preventing after-swarms, said:

> "Perhaps Doolittle is led to practice his method from the fact that he is largely using the Gallup hive and wishes to engage others toward a favorable opinion of that hive. In the absence of some such reason I would never follow the method he gives; because it is a laborious, time-consuming operation, at a season of the year when it is especially wise to economize both time and labor, without any corresponding advantage."

Doolittle makes a change of two words in this passage, putting "Taylor" for "Doolittle," and "Heddon" for "Gallup," and turns it upon Taylor in the September Bee-Keepers' Review. Says he tried for three years the Heddon-Taylor plan of moving, gradually turning the hive, and it took double the time of cutting out cells, besides the extra expense of the queen-trap. Says the term "laborious" applies particularly to the Taylor plan, even with the Heddon hive, and notes the fact that for every Heddon hive in use there are 50 to 100 of other kinds. Thinks Mrs. Harrison or Mrs. Axtell would have a hard time moving Langstroth hives; York would have trouble with chaff hives, and Taylor with tenements holding four to eight colonies, and with house-apiaries.

BEST
EXTRACTED HONEY FOR SALE
ALL IN 60-POUND TIN CANS.



ALFALFA HONEY

This is the famous white extracted honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

BASSWOOD HONEY

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is greatly preferred by those who like a distinct flavor in their honey.

PRICES OF EITHER ALFALFA OR BASSWOOD HONEY:

A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—One 60-pound can, 7½ cents a pound; 2 cans, 7¼ cents per pound; 4 or more cans, 7 cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. This honey is all

Absolutely Pure Bees' Honey.....

the finest of their kinds produced in this country.

We would suggest that those bee-keepers who did not produce any honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. The pamphlet, "Honey as Food," will be a great help in creating customers for honey. See prices on another page.

GEORGE W. YORK & CO., - 118 Michigan St., CHICAGO, ILL.

You Can Learn
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by our perfected method of giving lessons by mail. Easiest, simplest system. Send stamp for particulars.

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Bee-Hives, Sections, Shipping-Cases—everything used by bee-keepers. Orders filled promptly. Send for catalog. MINNESOTA BEE-KEEPERS' SUPPLY MFG. CO., Nicollet Island, Minneapolis, Minn.

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Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery
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BEESWAX always wanted for cash or trade.
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AUGUSTA, WIS.
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GENERAL ITEMS

Honey Crop a Failure.

The honey crop is a failure in this part of the State. There is not over 10 percent of an ordinary crop. I have not seen a bee on a white clover blossom this season, and not one linden tree in five that yielded any honey, or that the bees workt on at all.

Long live the American Bee Journal. I have found it a very great help to me.

J. C. Bergen.

Humboldt Co., Iowa, Sept. 21.

The "Golden" Comb-Honey Method.

I believe that the older and more experienced bee-keepers should have the first say in the bee-papers, and also at the bee-keepers' conventions, and I have always been anxious and willing to listen to men of more experience than myself, but there might be a line drawn somewhere, I am thinking. For instance, on page 483, S. A. Deacon got after J. A. Golden about his management of the bees in the production of comb honey. I knew as soon as I read the article that he (Deacon) was trying to get Mr. Golden to go on and explain the whole method over again. Mr. Deacon must have known that every practical bee-keeper had tried, or knew all about, the Golden system of producing honey. It might be all right to get a man up to talk at a bee-keepers' convention, for instance,

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QUEENS.

Now is the time to re-queen, and the place to get them is from Daniel Wurth. He furnishes good Queens by return mail for 45 cents each; 6 for $2.70; or $5.00 per dozen.
DANIEL WURTH,
36A4t Falmouth, Rush Co., Ind.
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FOR SALE An Out-Apiary of 80 colonies of Bees in double-walled hives with extracting-combs, extractor, etc.
WARD LAMKIN,
37A3t Ledyard, Cayuga Co., N. Y.
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HONEY

If you want Colorado Alfalfa, Sweet Clover and Cleome honey—comb or extracted—correspond with the Secretary of the Colorado State Bee-Keepers' Association. Our Honey ranks high in quality. Car lots a specialty.

Address F. RAUCHFUSS, Elyria, Colo.
31Atf Please mention the Bee Journal

just for the fun of hearing him talk; but I don't know what to say to Mr. Deacon for trying such a trick. It is out of place in print. Give us something more practical, Mr. D.

The honey-flow has been very light in this vicinity. I got probably 20 pounds per colony, spring count, and lots of the sections are filled with honey of different colors, but I could do no better, as it took some of my best colonies all summer to fill one super, and no swarms to amount to anything, either. WM. KERNAN.

Sullivan Co., Pa,, Sept. 15.

[Mr. Kernan, aren't you a trifle hard on Mr. Deacon? There are quite a number of bee-keepers who are asking for information regarding Mr. Golden's method of producing comb honey. We didn't think Mr. Deacon was too rough on Mr. Golden, and hardly think that the latter felt so, either. There is a deal of good-natured fun in that S(outh) A(frican) Deacon mixt up with his sound sense, and it will bubble over sometimes. But we are sure he intends no harm at all, only to draw people out, sometimes. —EDITOR.]

A Wheel-Ride Among Bee-Keepers.

I got home last evening from a trip on a bicycle to Minnesota. I rode something over 300 miles north of here, and saw a fine country, fine people, and had a fine time. I made the round trip in 12 days, and ate like a hired man. I got as far north as central Todd county. The basswood in Todd county is immense, but there was a worm which workt on the blossom, and so there was no nectar. One bee-keeper who had 30 or more colonies said he might have 30 pounds surplus. All complained of a poor season. J. P. BLUNCK.

Webster Co., Iowa, Sept. 18.

Keeping Worms Out of Honey.

In the Bee Journal of February 10, 1898, was a letter from Wm. C. Wolcott, telling how to keep worms out of honey, and how to get rid of laying workers. I have tried both and find they work well, the knowledge of which is worth the price of the Bee Journal for one year or more, to any bee-keeper.

I had two colonies that had become queenless, and became badly infested with worms. I removed the worms with a knife, and by exchanging frames with other hives I placed a queen in one on Sept. 5, but she did not lay. I attributed it to the weakness of the colony, and went to feeding them. In opening the hive Sept. 16, I found the queen, bees, honey and all, gone. In looking for them, I found all in the other queenless colony, doing well, and no fighting. How did they find out that that colony was queenless, and would accept them, if they do not have a language of signs? L. W. MCRAE.

Washington Co., Ala., Sept. 17.

Late Swarming—An Aster.

In answer to the inquiry "What is the latest time that bees swarm?" I would say that one year, between 1861 and 1865, I had a swarm issue Sept. 21, and another the next day, and they filled their boxes in two weeks. At that time I had square boxes, 12 inches inside measure, and eight inches deep, with slats between for tiering up, and had two of them together. If we could have a honey-flow like that, I presume they would do the same again.

Bees have done poorly here this year. Swarms that issued in May, some of them, will have to be fed unless they increase their stores yet.

I enclose a plant which I found growing quite plentifully on the river bottom, on which bees are working very strongly. What is it? If there is any considerable amount of it they ought to gather considerable honey from it. J. C. ARMSTRONG.

Marshall Co., Iowa, Sept. 16.

[The plant that Mr. Armstrong sends is an aster, of which there are very many varieties that bloom in September. The one in question is exceedingly common on river bottoms, and is known by some bee-keepers in central Illinois as "whiteweed." Cook says (pages 380–382): "But the numerous species of asters so widespread.... are replete with precious nectar, and with favorable seasons make the apiarist, who dwells in their midst, jubilant, as he watches the bees which fairly flood the hives with the rich and delicious honey."—H. S. PEPOON, Botanist.]

Bees at Home on a Tree.

On page 213 of "Langstroth on the Honey-Bee," is a description of how bees sometimes cluster on the limbs of trees and in other places and build their homes there. I have just discovered a case of this kind while hunting bees. I hived the bees from several different directions, and the lines all crost at the same point, but I could find nothing large enough for bees to make their homes in, but on closer investigation I discovered them hanging on the underside of a hemlock top. The tree was down, being turned out by the roots, and lay about three feet from the ground. The bees had been there for months, and had about 25 pounds of honey and some brood, but no eggs and no unsealed brood. I transferred them into a hive, and as soon as they get the combs fastened well in the frames I will move them home. E. C. NOLAN.

Midland Co., Mich., Sept. 17.

An Experience with Bees—Figwort.

I have 10 colonies of bees, three of them in box-hives and seven in a hive with movable frames of my own design and manufacture. I honestly believe that I think more of bees than any one on earth. I am a bee-man (in my way) from "away back." My grandfather Carroll, one of the first settlers in Shelby Co., Mo., kept from 10 to 100 colonies all the time, and it was no unusual thing for him to go into the woods in the fall and find enough bee-trees to fill a barrel or two with honey. From him my father learned to like bees, and he kept bees for a long time, but finally lost all he had and quit.

From my earliest days I have had a fondness for bees. We still have some wild bees in the woods, and there is nothing I enjoy so much as to hunt them. Father, brother and myself found 19 bee-trees last fall, and we must have gotten close to 1,000 pounds of honey from them. I don't think we will find any this fall, as there seem to be none in the woods.

Bees are doing poorly here, or have been.

Sweet Clover
And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order·

	5lb	10lb	25lb	50lb
Sweet Clover	.60	$1.00	$2.25	$4.00
Alsike Clover.........	.70	1.25	3.00	5.75
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Prices subject to market changes.

Add 25 cents to your order, for cartage, wanted by freight.

Your orders are solicited.

GEORGE W. YORK & CO.,
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"Early Wonder" Blackberry Plants.

Price, 25c per dozen; $15 per thousand. 150 pounds Spanish Needle Comb Honey. 14 cents per pound. EDW. SMITH,
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Buy Your Sections Now

while we offer them at a LARGE DISCOUNT, having added to our plant one of the most complete one-piece section machines, enabling us to turn out the most beautiful sections on the market. By sending us a list of Supplies wanted we can save you $ $ $ R. H. SCHMIDT & CO., Box 187, SHEBOYGAN, WIS.
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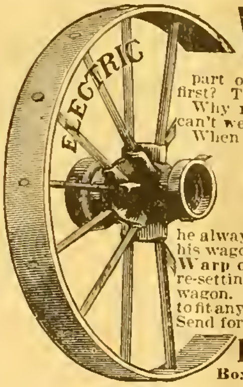

WHAT part of a wagon wears out first? The wheels, of course. Why not buy wheels that can't wear out?
When a man buys the
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he always has good wheels on his wagon. They can't Rot, Warp or become Loose; no re-setting of tires; they fit any wagon. We also make wheels to fit anything wearing wheels. Send for circulars and prices.
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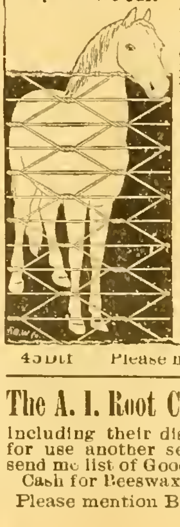

Keeps him in.
Keeps others out.
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With our Duplex Automatic Fence Machine you can make 100 styles of fence at the rate of 60 rods a day. Every rod of it will possess the three leading attributes made prominent in this ad. Makes a perfect general purpose fence at 18c. per rod. Poultry fence 19c. per rod. Rabbit-proof fence
BULL-STRONG
for nurseries, orchards, etc., 16c. per rod, and a good hog fence for 12c. per rod. Plain, coiled spring and barbed wire to farmers at wholesale price. Get our free catalogue before buying wire or fencing.
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The A. I. Root Co.'s Goods Wholesale. Retail.
Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. M. H. HUNT
Cash for Beeswax. BELL BRANCH, MICH.
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The Bee-Keeper's Guide

This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."

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The following offer is made to PRESENT subscribers only, and no premium is also given to the two new subscribers—simply the Bee Journal for one year:

Send us Two New Subscribers to the Bee Journal (with $2.00), and we will mail YOU a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both together for only $1.75. But surely anybody can get only 2 new subscribers to the Bee Journal for a year, and thus get the book as a premium. Let everybody try for it. Will you have one?

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Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

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Send for Circular and see the Prices on a Full Line of Supplies.

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Special Agent for the Southwest—

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Mr. Abbott sells our Hives and Sections at factory prices.

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Ho, for Omaha!

As we have many customers in the Northwest, and believing they will appreciate the low freight rates obtained by purchasing goods from a railroad center nearer to them than we are, getting a direct through-freight rate, thus cutting the freight in half, we have establisht a branch house at 1730 South 13th St., Omaha, Neb., where we will keep a complete line of all Apiarian Supplies, the same as we do at Higginsville, Mo. With the quality of our goods, we believe most bee-keepers in the West are already acquainted, but to those who are not, we will say that our goods are par excellent. Polish, snowy-white Sections, beautiful, straw-colored transparent Foundation, improved Smokers and Honey Extractors, and all other first-class goods, are what we sell. Kind and courteous treatment and honorable dealing our motto. On these bases, we solicit an order, feeling sure that if we sell you one bill of goods you will be our customer in the future.

PROGRESSIVE BEE-KEEPER, 50c per year. "Amateur Bee-Keeper," 25c. Both for 65c. postpaid. Sample copy of the PROGRESSIVE free, and a beautiful Catalog for the asking.

Address, Leahy Manufacturing Company, Higginsville, Mo., or 1730 South 13th St., Omaha, Neb.

Please mention Bee Journal when writing.

See Honey Offer on page 619.

They seem to be storing some honey now from Spanish-needle and corn-tassel. It has been very dry, but we had a fine rain last night, and it will prolong the fall bloom. I had one swarm in July and it is doing nicely.

I would like so well to have my bees in the modern hives, but can't, as I am not able to buy them. I have tried to get them by working in the factory, or selling for some company, but have been unsuccessful so far. However, I am going to have five or 10 modern hives next spring, sure. If I can't get them any other way I will sell half my bees, and then I won't need so many hives. See? "Where there's a will there's a way," and I am sure I have the "will."

I enclose a leaf and flower of a wild weed that grows around here, and I believe the bees like it better than anything else that grows in this locality, as I have frequently seen from 25 to 50 on a single stalk. What is it?

H. S. CARROLL.

Shelby Co., Mo., Aug. 24.

[The plant sent by Mr. Carroll is commonly known by the name of "figwort," and is a plant distributed everywhere over the northern United States. It is the type of a great family of plants bearing the same title, "the Figwort family." Without question, this is one of the very best plants for the bee-keeper, and its period of blooming extends over probably two months of the summer, when honey flowers are often scarce. As I before have said of other plants, it would well repay extensive cultivation as a bee-food, and as it is perennial, once establisht it would largely take care of itself. Cook praises it highly as a honey-plant.—H. S. PEPOON, Botanist.]

Bees Did Fairly Well.

Bees did fairly well this season, in this part of the country. Last May I took 39 colonies on shares, and increast them to 86, by natural swarming. I have taken off 2,349 pounds of comb honey, and could have done a little better if I could have given them better attention, but I could be with them only Sundays, and each forenoon during the swarming season. Comb honey sells here for 10 cents; extracted, 6 to 8 cents.

WM. BROBYN.

Weld Co., Colo., Sept. 12.

Secured About Half a Crop.

I have not taken off all of my honey yet, but as nearly as I can estimate it, I will have about half a crop—about 20 or 25 pounds per colony, spring count; and as far as I can learn, the yield will be about the same throughout this section, some a little more and some not any.

SCOTT LAMONT.

Wabasha Co. Minn., Sept. 10.

Well Satisfied With His Bees.

My bees have been a source of pleasure and encouragement to me this year, having done better than ever I have had bees do before. I had four colonies of pure Italians in the spring, and have increast them to 14 colonies. As to the amount of honey taken, I have lost calculation, but I began taking off sections the third week in May, and continued doing so weekly up to August, and I have some of the finest honey any one could wish to see. I ran one colony for extracted honey, and it filled 24 Hoffmen frames above the brood-chamber; from the latter I would not extract. E. L. ETHERIDGE.

British Columbia, Sept. 12.

Had a Good Season.

I am just getting started in the bee-business. We have had a good season. From 20 colonies in the spring I have taken about 1,500 pounds of honey. G. L. VOORHEES.

Greene Co., N. Y., Sept. 14.

Clark Co., Wis., Convention.

Some of the bee-keepers of Clark county, Wis., met in Greenwood, Sept. 10, for the purpose of organizing an association to be known as the "Clark County Bee-Keepers' Association."

The following officers were elected: President, L. Allen; Vice-President, P. Kline; 2nd Vice-President, Geo. Drinkwine; Secretary, Chas. Pratt, of Greenwood; Treasurer, C. T. Haskins.

It was decided to hold the next meeting in Greenwood, Oct. 20, 1898, at which time we shall adopt a constitution, fix the annual dues of members, and transact such other business as may be necessary. All who feel interested are invited to attend.

CHAS. PRATT, Sec.

Endorses Plain Sections and Fences.

I want to speak a good word for the plain sections and fence separators. This is my first year's trial, and the result is very encouraging. I get 2½ cents a pound more for my comb honey put in the plain sections than I do for the others. The plain are filled out much better, and are more attractive. I can get 12½ cents a pound for these readily when the 4¼x4¼ go begging at 10 cents a pound; in the use of these tall sections and separators I have obtained at least one-third more honey. I propose another year to use none other than the plain sections and fence separators. L. ALLEN.

Clark Co., Wis., Sept. 13.

Light Honey Crop.

The honey crop is very light in this section—not more than one-half that of last year, but prices are a little better.

W. W. WHIPPLE.

Arapahoe Co., Colo., Sept. 14.

Thumb-Tacks Made from Dies.

I am a beginner in bee-keeping, and so have not been troubled by the record problem yet, but I was very much interested in John Atkinson's article on page 562. From past experience in another line it occurred to me that Mr. Atkinson could make his own thumb-tacks by the use of a set of steel dies. By the use of a steel die, numbers, letters, or words, can be stampt on pieces of sheet copper. For use inside the hive the numbers could be on little strips of copper long enough to bend over the the top of a frame with the fingers. For outside work the corners could be turned at right angles and prest into the wood. Where rough usage was expected the little metal tabs could be nailed on. Sheet copper can be procured from the nearest tinner. I forgot where I bought my dies, or stamps, as they are sometimes called, but the Root Co. will get them for you.

Ashland Co., Ohio. R. H. LEE.

Best Crop in Six Years.

I will get the best crop of honey this year that I have had for six years, and I am selling it for 12½ cents per section, by the case. I took 84 sections of honey from one colony, and have one with 105 sections about ready to come off. The bees work strong on the heart's-ease, and will until frost kills it. SAMPSON STOUT.

Sumner Co., Kan., Sept. 16.

Short Honey-Flows.

The spring and summer flow of honey was very short, and of very poor quality. The fall flow is better, and of good quality. White clover seemed to yield no honey at all, or not enough to be noticed in with the dark honey. EDW. SMITH.

Madison Co., Ill., Sept. 16.

Report for the Past Season.

I have taken only 268 nice, finisht sections of honey from 24 colonies, and sold them for $67 cash. Now, I have 39 colonies with plenty of honey for winter. I sell my honey in the home market, by peddling it.

E. B. KAUFFMAN.

Lancaster Co., Pa., Sept. 9.

Convention Notices.

Wisconsin.—The annual meeting of the Southwestern Wisconsin Bee-Keepers' Association will be held at Lone Rock, Wis., Oct. 5 and 6, 1898. All bee keepers are requested to make an effort to attend. A large attendance and instructive meeting are expected.

Calamine, Wis. F. L. MURRAY, Sec.

Tennessee.—The Southern East Tennessee Bee-Keepers' Association will hold its 4th annual meeting at Cookson's Creek, Polk Co., Tenn., Thursday, Oct. 6, 1898. There will be an interesting program for discussion. All friends of the Association are cordially invited to attend, and especially should the membership be present. Open at 9 a.m.

Fetzerton, Tenn. W. J. COPELAND, Sec.

400 Young Golden Queens...

Warranted purely mated. just started to lay. **MUST BE SOLD SOON**, so order **QUICK.** 50 cents each; 6 for $2.75. or $5.00 per dozen. Ten years' experience with the best of breeders, and the best of methods enables me to furnish the **BEST OF QUEENS.** Safe arrival and satisfaction guaranteed.

H. G. QUIRIN, Bellevue, Ohio.

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BEES, HONEY, MONEY

Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

J. P. H. BROWN, Augusta, Ga.

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"Watch Pouder's Ad"

SEE THAT WINK!

Bee-Supplies! ROOT'S GOODS at Root's Prices.

Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Catalog free. **Walter S. Pouder,**
512 Mass. Ave.,
INDIANAPOLIS, INDIANA.

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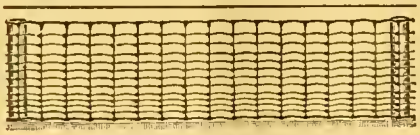

ELASTICITY

in wire fence is now an admitted necessity. That's what our coil is for. We own it. Catalogue free.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

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PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y.

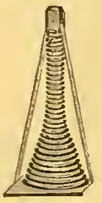
Muth's HONEY-EXTRACTOR
Square Glass Jars.

Root's Goods at Root's Prices.

BEE-KEEPERS' SUPPLIES in general, etc etc, Send for our new catalog.

Practical Hints" will be mailed for 10c. in stamps. Apply to—

Chas. F. Muth & Son, Cincinnati, Ohio.



Queen-Clipping Device Free

The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

GEORGE W. YORK & CO.,
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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Sept. 20.—Honey of all kinds is selling well, with the best grades of white steady at 12c; a little fancy white clover has brought 13c. Off grades of white to amber, 10 to 11c; the dark shades, 8 to 9c. Extracted, 6 to 7c for white; ambers, 5 to 6c; and dark, 5c. Beeswax steady at 27c.

R. A. BURNETT & CO.

St. Louis, Sept. 9.—Fancy white comb, 12 to 12½c.; A No. 1 white, 10 to 11c; No. 1 white, 9 to 10c.; dark and partially filled from 5 to 8c, as to quality. Extracted in cases, No. 1 white, 6 to 6½c; No. 2, 5½c; amber, 5c; in barrels, No. 1 white, 5½c; amber, 4½ to 5c; dark, 4 to 4½c. Choice Beeswax, prime, 24c; choice, 24½c. At present there is a good demand for honey. WESTCOTT COM. CO.

Kansas City, Sept. 9.—Fancy white comb, 12@13c; No. 1, 11@12c; amber, 10@11c. Extracted, white, 5½@6c; amber, 5@5½c; dark, 4½@5c. Beeswax, 22@25c.

The receipts of comb honey are larger.

C. C. CLEMONS & CO.

Columbus, O., Sept. 23. — Fancy white comb, 14 to 15c; No. 1 white, 12 to 13c; No. 2 white, 10 to 11c; fancy amber, 10 to 11c.

Fancy white continues scarce and wanted. Those having any to market will please correspond with us.

COLUMBUS COM. AND STORAGE CO.

New York, Sept. 1.—We have a good demand for new crop comb honey, and it is beginning to arrive. Have sold some shipments at 14 to 15c for fancy white, 12 to 13c for No. 1 white, and 10 to 11c for fair white. We think these will be about the ruling prices this fall; exceptional fine lots may sell at a little more. Extracted is in good demand at unchanged prices. Beeswax dull at 26 to 27c.

HILDRETH BROS. & SEGELKEN.

Boston, Sept. 16.—Fancy white in cartons, 14c; A No. 1, 12½ to 13c; No 1, 11 to 12c; No. 2, 10 to 12c. California extracted is practically out of the market. Florida in barrels is selling from 6 to 7 cts., according to quality. Beeswax, 26 to 27c. Very light stock; only fair demand.

The fall demand for honey is now opening, and from present indications we look for good prices right through the season.

BLAKE, SCOTT & LEE.

Indianapolis, Sept. 1.—Fancy white comb honey, 12@12½c; No 1, 10@11c. Extracted, white, 6@7c. Beeswax, 25@27c.

Only a few arrivals of fancy white comb; market almost bare, and demand good. Quite a little comb honey from honey-dew is being offered, but there is simply no demand for the stuff. WALTER S. POUDER.

Milwaukee, Sept. 20.—Fancy comb, 12 to 12½c; A No. 1, 11 to 12c; No. 1, 10 to 11c; dark and amber, 8 to 10c. Extracted, in barrels and kegs, white, 5½ to 6c; dark, 5 to 5½c. Beeswax, 25 to 26c.

The condition of this market for honey is favorable for shippers of good quality either in comb or extracted, and the receipts, while they are with us very fair, are not as liberal as may be, while the demand is very fair at our quotations. We advise liberal shipments of 1-pound sections and extracted.

A. V. BISHOP & CO.

Buffalo, Sept. 16.—There is quite an improved demand for honey at present, and moderate amounts can be sold of strictly fancy 1 pound comb at 11 to 12c; lower grades range from 10c downward. We advise but moderate shipments for awhile yet. Extracted—average grades could be sold at 4 to 5c. Fancy beeswax, 27 to 28c; common, 20 to 25c. BATTERSON & CO.

San Francisco, Sept. 14.—White comb, 9 to 9½c; amber, 7 to 8½c. Extracted, white, 6½@6¾c.; light amber, 5½ to 6c. Beeswax, 24@27c

Stocks are light of both comb and extracted, but more especially so of choice extracted, the latter being in most active request. Market is firm at the quotations, with holders disposed in most instances to ask somewhat higher figures.

Cleveland, Sept. 1.—Fancy white, 13@14c; No. 1, white, 12@12½c; light amber, 11c; buckwheat, 9c. Extracted, white, 7c.; light amber, 6c.

The demand for honey is exceptionally good, owing to the crop in this vicinity being very light. A. B. WILLIAMS & CO.

Detroit, Sept. 24.—Fancy white, 11@12c; A No. 1, 10@11c; No. 1, 10c; fancy dark or amber, 9@10c; other grades, 8@9c. Extracted, white, 6@6¼c; dark or amber, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

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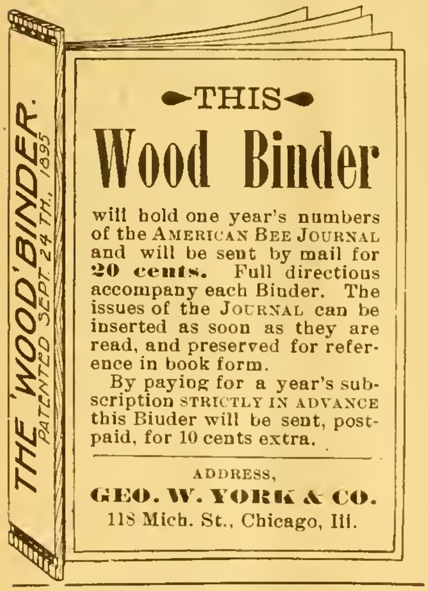

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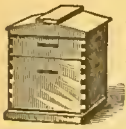

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38th Year. CHICAGO, ILL., OCTOBER 6, 1898. No. 40.

CONVENTION PROCEEDINGS

UNITED STATES BEE-KEEPERS' UNION.

Report of the 29th Annual Convention Held at Omaha, Nebr., Sept. 13-15, 1898.

DR. A. B. MASON, SEC.

The 29th annual meeting of the United States Bee-Keepers' Union was called to order at 10:30 a.m., Sept. 13, in the Commercial Club Room at Omaha, Nebr., by the President, George W. York, of Illinois.

Prayer was offered by A. I. Root, of Ohio, after which, in the absence of O. O. Poppleton, of Florida, the following paper, written by him, was read by the Secretary:

Honey-Production in Our New West Indian Possessions—Cuba and Porto Rico.

The coming Americanization of Cuba and Porto Rico presents many interesting problems to us as a people. This is especially true with bee-keepers. With some, because of a contemplated removal to one of those islands; and to all, because of the inevitable effect on our business. It is possible my two years' experience in Cuba enables me to give some idea of the good and bad features to be found there, but I understand better than almost any one else, that the subject can only be skimmed in an essay like this.

Cuba is without doubt one of the finest honey countries in the world. I consider it as fully the equal of California, and in some respects superior. Should Cuba be annext to the United States, thus not only doing away with all duties on honey shipt *to* this country, and duties on hives and implements *from* this country, but in time improve facilities for transportation all over the island itself, it will, I think, affect the honey markets of this country far more than the great crops from California have yet done. It is well for us to look these facts squarely in the face.

At present there is a Cuban export duty of 6 cents, and an American import duty of 20 cents per gallon—over 2 cents per pound—on honey from there. These duties and the wretched government of the island itself, are what has kept our markets from being flooded with Cuban honey. Remove these two conditions and the result is plain.

There are but few movable-comb apiaries in Cuba—so far as I know, less than a dozen in all. Nearly all of them are managed, if not owned, by Americans. It is exceedingly difficult to get reliable statistics of the amount of honey annually produced at these apiaries, but from such facts and figures as I did get while there, and since, I judge that any well managed apiary of 300 or more colonies is safe for a yield of from 40,000 to 70,000 pounds of honey each season. As there are chances for locating such apiaries all over the island, it can be easily seen what an enormous harvest can be obtained.

One great advantage Cuba has over any other place I know of, is that an entire failure to secure a fair crop is almost if not quite unknown. As well as I can learn, the poorest crops will be fully as much as 50 percent of the largest crops. All bee-keepers can fully understand the advantage of these conditions.

The principal disadvantages are, the duties already mentioned, and the bad roads, making it so costly and difficult getting honey to a shipping port. The last difficulty is so great that many owners of bee-gum apiaries in the interior of the island—so I have been repeatedly informed—practice saving only the wax for sale, pouring large amounts of honey on the ground to waste.

While there are scores of trees and plants yielding some honey, the great bulk of the crop comes from a plant, or rather vine, known to American readers of our bee-periodicals as bell-flower or companea. Its Cuban name is Aguinaldo (literally, "a Christmas present," so-called because of its being in full bloom at Christmas time). Scientifically it is a Convolvulus (not a Campanula, as was figured in one of our periodicals several years ago); genus, *Ipomœa*; species, *Sidæfolia.* The few species of the genus found in the United States are known as "morning-glories," only one of which, Ipomæa Batatas (sweet potato) is of material value to the human race. All the species of the genus I know of are vines with heart-shaped leaves, and bell-shaped flowers, the one which furnishes so much honey in the West India islands being the most profuse bloomer of them all. At times the bloom is so abundant that hedges and stone fences look like snowbanks from a distance. It commences to bloom late in November, continuing until in February, January being the month of greatest bloom, with December a close second. The quality of its honey is good, color white, with good body and rather

O. O. Poppleton.

mild and pleasant flavor. It is the equal of white clover honey in color and body, and in flavor I would rank it as next to that best of all honeys.

Other plants and trees furnish some honey, but the royal palm is of the most value, I think; not because it gives any surplus honey, but because it yields every day in the year, and seems to be the only source of honey from May to September. Many colonies, unless fed, will starve to death during the summer, and many more would but for this tree.

Large apiaries have been the rule in Cuba, all movable-comb apiaries I know of having 300 to 600 colonies in one locality. I think this is a mistake, but I had no chance to learn whether smaller apiaries would be better.

I think it will readily be seen from what I have written that the main points one needs to look well to, when deciding on a location in those islands, are:

1st. A locality with plenty of aguinaldo and royal palms.

2nd. Nearness to a port from which honey can be shipt to a market.

3rd. Very close proximity to a railroad or a good macadamized road leading to a port.

While there are other desirable conditions that should be secured in a location if possible, these three I have given are the most important.

My personal experience was in the country a few miles west of Havana, but, as well as I can learn, conditions are very similar in the other parts of Cuba, and also in Porto Rico.

I have not attempted to go into details of bee-keeping in Cuba, as it would be useless to attempt it in a paper like this. Many of the details it would be well for any one who expects to go there to know, can be found in an article commencing on page 539 of Gleanings for 1889. O. O. POPPLETON.

H. Lathrop (Wis.)—Mr. Poppleton says nothing about foul brood, of which I understand there is a great deal in Cuba.

F. Danzenbaker (D. C.)—A great drawback to bee-keeping in Cuba, to one not accustomed to a residence there, is the large number of mosquitoes, they being so numerous at times as to literally cover the sides of houses.

Dr. C. C. Miller (Ill.) spoke of the duties on honey and the price of it, and thought if the duty was removed entirely, altho much more honey would be sent to the United States, it would not make more than half a cent a pound in the price of our honey, but thought it not likely that the duty would be removed.

E. Whitcomb (Nebr.) thought it would not take much patriotism to receive what honey might be sent from Cuba, and doubted if it would affect the price of our honey at all. Climate has much to do with the flavor of honey; a warm climate producing that of inferior quality, and a colder climate producing honey of a much better flavor.

L. D. Stilson (Nebr.)—A soldier with the army in Cuba recently told me that we had no reason to fear Cuban honey, for it is much inferior to that produced in this country.

E. R. Root (Ohio)—I like the flavor of alfalfa honey; Southern honey has a strong flavor which is liked by some.

Mr. Stilson thought that perhaps the strong flavor of Southern honey comes from honey-dew.

A. I. Root (Ohio)—I have sampled honey, and did not find it insipid, but strong. Some Cuban honey I like. Some Southern honey has a peculiar flavor that I like. Most localities yield both good and poor honey.

Mr. Danzenbaker—Children like strong-flavored honey, but older people usually like the light-colored honeys the best. I have sold a great deal of honey in Washington that came from North Carolina and Virginia, and it was as white and good as any honey.

Joshua Terry (Utah)—We don't find alfalfa honey insipid as some seem to think it is. We think it is good, and prefer it to any other kind of honey.

J. S. Scott (Utah)—My chief experience with bees has been in Utah, where there is an abundance of alfalfa. We do not think the honey is either insipid or strong. Sweet clover blooms at the same time that many other honey-plants bloom, so we don't get any distinctive sweet clover honey. I like the sweet clover flavor, and all in our region prefer it to alfalfa.

Dr. A. B. Mason (Ohio)—Last season I had about 1,500 pounds of extracted sweet clover honey. It was not extracted until the combs were well sealed. It weighed only 11½ pounds to the gallon, and I didn't call it first-class honey altho it was even whiter than white clover honey. Having a few hundred pounds of it left over to this season, and being candied, I melted it in a sun wax-extractor. Its flavor was much improved by the process, and the weight was increast to 12 pounds to the gallon. I used to think with Mr. Muth, that extracted honey could be ripened in cans so as to be of as good quality as if ripened on the hive, but I quit that belief some time ago, but with this season's experience I am led to believe that it can be ripened, and its flavor improved by giving it a good heating in a solar extractor.

Dr. H. L. Miller (Nebr.)—I have on hand now perhaps 1,500 pounds of extracted sweet clover honey. It was green when extracted. I thought it was ready for extracting, but it was green, and I would not offer it to my customers. I have put the most of that through the sun wax-extractor this summer, and it is nice. I know it is sweet clover honey, for I could smell it through the side of the hive, as you can basswood honey. It has a peculiar, disagreeable smell. I think Mr. Root is probably right when he says it was not ripe. I put it through the sun wax-extractor, as I say, and it weighs about 12½ pounds to the gallon; it would weigh only about 11½ pounds to the gallon before.

HONEY SAMPLES AND QUESTIONS.

Mr. Stilson—If it is the wish of this convention I think it would be advisable to have samples of the various kinds of honey placed on our table for discussion. I do not think it would be a very great trouble to get it. Some of us are connected with the Exposition here, and we can get samples of everything.

Dr. C. C. Miller—I move that it be exprest as the wish of this convention that we have samples of as many kinds of honey as possible placed upon our table for examination and discussion.

The motion was seconded and carried, and Mr. Stilson was appointed by the President as a committee of one to secure such samples.

Dr. Mason—In regard to the work of the convention on questions, I move that a committee be appointed to whom all questions shall be referred, and that they select some one person to answer each question.

The motion was carried, and the committee appoined later on consisted of Dr. Mason, Ernest R. Root and Harry Lathrop.

DISCUSSION ON HONEY CONTINUED.

A. I. Root—When I was in Salt Lake City I tasted samples of sweet clover honey, and I think I publisht in my report that it was equal in looks and flavor to any honey in the world. If they have some of that sweet clover comb honey here to-day I predict that the majority will agree with me that it is equal to any honey. The taste and smell will decide whether it is sweet clover honey or not. The taste is very much like chewing the dried plant, or chewing the seeds, and when taken out is apt to be so rank as to be offensive. Basswood and sweet clover honey is disagreeable when it is taken out, but after it has been thoroughly ripened most people think it very good. It is the same with sweet clover as with almost any other kind of honey. Well ripened honey, both sweet clover and alfalfa, I should say was equal to any white clover honey.

Dr. Mason—I have taken but little comb honey this year. One of our boys is a splendid judge of honey—eats it at every meal. I took some sweet clover honey this year, but it is mixt with honey-dew and looks dark, and when I offered him some in sections he didn't want it, but I told him to taste it. He did so, and then said I could give him all of that I had a mind to. It was just discolored with honey-dew. It was thoroughly ripened and really rich.

Mr. Danzenbaker—In the city of Washington, where I sell honey, I have a chance to notice the tastes of different people from different parts of the country. A person will come from the State of New York and ask if I have any buckwheat honey; if from Virginia, he wants blue thistle; if from Ohio, white clover. It seems they like the kind of honey they had when they were children at home, as the German likes his sauer-kraut and his beer. I have been up to New York and found that they could sell buckwheat honey to a good many people. Where we live buckwheat doesn't produce any honey. I have kept bees a good many years, and I could not say that I ever saw any buckwheat honey that they put into the sections. Other things bloom at the same time and yield honey, but the buckwheat produces no honey. We could smell it sometimes outside the hives, but we could not find it inside. I don't like it at all, but New York people all relish it. I think sometimes it is a good thing that the people have a relish for the thing that grows where they live, and where they are brought up. This matter of taste for a particular honey depends a great deal upon whether they had it from childhood or not.

Mr. Cameron—I offered some honey to a person last fall, and he couldn't eat it; said it made him sick. That has suggested to me a question: Is it the honey that makes people sick, or what is it? I want to ask these doctors what it is about honey that makes people sick? Is it some peculiar kind of honey?

Dr. C. C. Miller—There is peculiar honey and there are peculiar people. Sometimes it is the honey and sometimes the patient.

Pres. York—When I first met Dr. Peiro he told me could not eat honey; that it made him sick. I gave him some honey, and he could eat it all right. He had been getting the glucosed article, and of course it made him sick.

A Member—Doesn't pure honey sometimes make people sick?

Mr. Cameron—I have noticed that comb honey sometimes makes people sick. I didn't know but it might have been poisoned by bee-poison—by the bees crawling over it and depositing the poison from their stings. Will that make people sick? I notice in opening hives sometimes, especially if it is a little cold, that the bees run around with their stings out, and the poison will no doubt be deposited on the combs. It may be it is that which makes people sick. It might not make all people sick, but I presume it will some.

A. I. Root—There were some boys who cut a bee-tree in our county and they ate all they possibly could, and the honey made them all sick. I ate a lot of the honey—rather more than I do usually, and it didn't make me sick at all. I was familiar with it, and knew how much to eat; it didn't hurt me. A person that has not eaten any honey for a good while—a good many years—might be made sick if he would go to work and eat as those boys did, even pure honey.

Mr. Whitcomb—You will find people who are not able to eat honey at all.

Dr. Mason—There is no doubt but that eating too much honey will make people sick. There are some people who can't eat any without being made sick. But some of us know that there is a very simple remedy for that. When the children of Israel were going into the Land of Promise, they were told that it would be a land flowing with milk and honey. If persons who are made sick by honey will take milk with it, it won't affect them that way.

E. S. Miles (Iowa)—I would like to give my experience. My two brothers cut a bee-tree one time when they were not used to honey, and of course they ate too much—they ate all they wanted, and my mother also ate of it, and it made them all so sick they thought they were going to die. They drank milk with it, and they thought it was the milk that did it. Since I have been producing honey it agrees with them whether they drink milk or whether they don't. It looks to me as if in that case they simply ate too much. If they ate too much no doubt the milk wouldn't save them. I think a person should be temperate in using honey when he isn't used it, the same as with everything else. Persons who are used to honey could eat a good deal more than those who are not.

Dr. C. C. Miller—The question was askt whether it is not the poison of the bee-stings on the honey that makes people sick. The latest investigations I think show that the poison of the bee-sting is something separate and distinct from the formic acid. There is formic acid in honey, but I am not so sure that there is any real bee-poison in honey. The statement is made that the bees in crawling over the combs when they are disturbed will thrust out their stings with drops of poison on them. I very much doubt whether those drops of poison are ever deposited on the combs; and if it were, I think it would evaporate. The formic acid that is in honey gets there through the blood of the bee. I doubt whether anything gets into the honey through the sting of the bee; I think that an utter and entire mistake. The formic acid gets into the honey through the blood of the bee; we find it there, and it is a useful part of the honey. One of the good things about honey is the formic acid in it. Don't let us make a mistake by saying that the honey is poisoned by the bee-stings.

Dr. Mason—Is there formic acid in the poison that comes from the sting?

Dr. C. C. Miller—As I understand it the latest investigations show that the poison in the bee-sting is entirely separate from the formic acid. Formerly it was said that the formic acid was the poison; but that is not so understood now.

Mr. Whitcomb—Perhaps there is an explanation as to why honey taken from bee-trees makes people sick. When the tree is cut open and the bees aroused, their first instinct is to save everything they can, and they run around over the combs with the stings thrust out, and little drops of poison may fall upon the combs and get into the honey. Honey taken by the old-fashioned robbing process, where the bees are allowed to run over the combs and the poison runs off of the sting, will make people sick. I don't know but that sometimes a single drop of the poison might kill a person, taken either into the stomach or into the circulation. We ought to be careful to keep it out of the honey. I have had cases under my observation where people could not take a teaspoonful of honey without making them sick, if it were taken by the robbing process, while honey taken by the bee-escape process would not affect them. There was a case of a lady in Chicago who had been from a child unable to eat any honey. I took some honey up to the house at night and she ate of it—ate as much as any of us. There was also another case at our State fair where a man who had not been able to eat honey before, ate of it several times there, and reported that it hadn't made him sick. In the robbing process, or in cutting bee-trees, the bees rush over the honey and run the sting out, and small particles of poison may drop on the combs.

Dr. C. C. Miller—Whilst not desiring to contradict that, I want to add an interrogation point. It is not settled that the poison does not get into the honey, but it is possible that Mr. Root's explanation should go along with that—that when honey is taken from a bee-tree by the robbing process people may take an unusual amount of it, and that unusual amount is enough to account for their being made sick, without any poison in the case.

Mr. Whitcomb—If I find that honey taken by the robbing process makes people sick, while honey taken by the bee-escape process does not, I don't see how to account for it in any other way than by supposing that honey has been poisoned.

Dr. Mason—I want to take Dr. Miller's interrogation point away. That matter, so far as I am concerned, is settled. I have sometimes eaten of this poison. I have been stung several times on the tongue, and have felt the sickness coming on without any doubt. In uncapping, I have the habit of chewing on the cappings, and sometimes I have unconsciously put a bee into my mouth. I have often felt the sickness coming over me, without any doubt from the effects of the poison. I know what it is.

The convention then adjourned until 1:30 p.m.

[Continued next week.]

CONTRIBUTED ARTICLES

Using Two-Story Brood-Chambers—Division-Boards.

BY DR C. C. MILLER.

The editor of the Bee-Keepers' Review quotes the question and answer about using two-story brood-chambers (American Bee Journal, page 486), and comments as follows:

> "It seems to me that some of us are not looking at this matter in the right light. Dr. Miller's idea, if I understand him, is something like this: In order to get honey we must have bees. The more bees the more honey. If the queen has filled all the available cells in eight frames, give her more in an additional story; then you will get more bees, and, consequently, more honey. I think this is correct reasoning. I agree with it. But, Doctor, let's go a little farther. A queen that has eight combs well filled with brood just at the approach of the honey harvest, will not fill eight more so full as another queen would have filled them if she had had them early in the spring.
>
> "To put it in a different shape, if a man is going to put his capital into an extra hive and set of combs for each of his colonies, he will get more bees, and, consequently, more honey, if he has a queen for each of these new hives; in short, if he has them occupied by regular colonies. The profitable keeping of bees does not depend so much upon having each *queen* occupied to her full capacity, as it does in having the *combs* and *hives* occupied to *their* full capacity."

Editor Hutchinson is one of those men so eminently fair in discussion that it is almost a pleasure to disagree with him. I'm not certain, however, that we can get up any disagreement in the present case. He agrees with me up to a certain point, and then says, "But let's go a little farther." Very well, Mr. Hutchinson, I've gone a little farther with you, and think your reasoning correct. I agree with it.

Now, "let's go a little farther." After going over the ground you have gone, the time comes that has come with very many of us—perhaps with the majority of us—when we desire no more increase, have all the bees we think our pasturage will stand, and want all the honey we can get with a given amount of bees and a given amount of labor. We want to reduce labor to a minimum, and produce honey to a maximum.

I think it is agreed that a large colony produces more honey *in proportion to the number of bees* than a small one. It will also consume less honey in a year in proportion to the number of bees than a small one. Suppose my field is such that its limit will be reacht if I have 5,000,000 bees in the season. I may give extra stories, and have 75 colonies with 66,666 bees in each, or I may take the plan you suggest, and have 100 colonies with 50,000 bees in each. The 75 stronger colonies will consume less and store more than the 100 weaker ones, and the 75 will take less labor than the 100. So when you have all your field will bear, the profitable keeping of bees does not depend so much upon having the combs and hives occupied to their full capacity as it does on having each queen occupied to her full capacity; in other words, having as strong colonies as possible.

IS THERE DANGER OF MISUNDERSTANDING?

On page 437 of this journal, "Illinois" says: "I have the dovetail hive, and have put the division-board in the middle of the frames. Is that the right place for it? If not, where does it belong?" I replied: "Put in all the frames, crowd them all close to one side, then put the dummy close up against the last frame." Critic Taylor refers to this in the Bee-Keepers' Review, heading the item, "Instruction that might possibly be misunderstood by a novice," and says:

"With such frames as the Doctor uses that advice would no doubt be sufficient, even for one as wanting in experience as 'Illinois' is, but with the common hanging frame used by most of the beginners who read the Doctor's replies, one can imagine what a deplorable mess would be made in carrying out these instructions."

Allow me to correct a wrong impression on your part, Mr. Taylor, by saying that most of the frames now in use in my hives are "common hanging frames," and I am familiar with them through many years' use, and know very well what a mess would be made by crowding them close to one side. But there was no common hanging frame in the question. "Illinois" specially mentions a dovetail hive with a division-board. I very much doubt whether most of the beginners who read my replies use common hanging frames, as you suppose, and still more do I doubt whether any beginner during the present year has received a dovetail hive with division-board and common hanging frames. Even supposing common hanging frames were in the case, the danger of being misled would be largely averted by the remark following, which reads:

"If the hive were made just wide enough to take in the frames......But there will be a space between the dummy and the side of the hive......That gives play enough for the dummy so it can be easily be taken out."

Mr. Taylor, let me give a hypothetical case: On page 281 of the Review, speaking of boiling foul-broody honey, you say: "I consider 15 minutes boiling sufficient; having first added an equal amount of water." Now, suppose I should say, "That is 'instruction that might possibly be misunderstood by a novice.' 'An equal amount' in the place in which it stands might be understood as meaning 15 minutes. 'Imagine what a deplorable mess would be made' if the novice should pour water into the honey at any ordinary rate, for the space of 15 minutes. If I should say that, you would probably call me hypercritical. I think the danger of misunderstanding in the case of my advice is just as remote as in that of yours. I don't say you are hypercritical. But if any one else does, I make no promise to defend you.

McHenry Co., Ill.

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The Queen-Excluder and Its Inventor.

BY F. GREINER.

[Continued from page 614.]

Now to return to Mr. Hannemann again. He was so taken up with the superiority of his system and management that he could see but little good in any other; and, being ignorant as to the conditions in other lands, notably North America, he showed mistrust of everything that was reported from here. He says, for instance, at the close of the article of his, written in 1879:

"And while my results, as shown, seem meager by the side of such yields as are reported by an Adam Grimm, I am satisfied with them because mine really exist. Grimm's are only on paper."

Our older readers will remember who Adam Grimm was. He was a pioneer in American apiculture; he made more money with bees than any one else—at least in his time. His writings always had the mark of honesty upon them, and I never heard a word against his character. I took it upon myself to make a reply in the Bienen-Zeitung (this must have been in 1880), explaining to the German bee-keepers Hannemann's alleged mysteries of American bee-keeping. Hannemann, for instance, couldn't comprehend how there could be room for 27 boxes weighing 130 pounds, on a hive having 24x15 inches of top surface. Grimm had reported such a yield from a single 10-frame Langstroth hive, such as was then commonly used. Hannemann had evidently never heard of *tiering up* nor of removing full boxes and replacing with empty ones, so he could not understand how the thing was possible, and at once jumpt at the conclusion, "It is all a lie, a great humbug," and, worst of all, says so before the thousands of German readers. He reasoned thus:

"One hundred and thirty pounds of comb honey would occupy a space of 3,500 cubic inches. To give this amount of room to a colony occupying a hive of 2,500 capacity is an impossibility, as every one can see. Furthermore, it is impossible for one colony of bees to fill such a space with combs and honey outside of the hive. It would require, with a six-weeks continuous honey-flow, 9 kilograms (19 4/5 pounds) of worker-bees. No queen is capable of producing this amount of bees in so small a hive, nor, for that matter, if ever so large a hive."

Well, a good many of us who have been long in the business have now and then had these phenomenal years and yields. We know from experience that it is possible for a colony to fill a space of 3,500 cubic inches with combs and honey. We have had these cases under our own hand, and what we have seen with our own eyes can by no theory be reasoned out of existence. Facts are stubborn things.

Another point Mr. Hannemann was trying to make out of Grimm's reports was, that the climate must be unsuitable for bee-keeping here, for a neighbor of Grimm had 99 colonies out of 100 frozen to death one winter. Here Mr. Hannemann overlooks the fact that, altho a country may have very severe winters, and actually freeze the bees (a condition I cannot imagine, however), yet the summers may be warm, flowers may be plentiful, and the meteorological conditions very favorable for the secretion of nectar. There is no doubt that a mild climate is favorable for the wintering of bees, and most of us wish we had that; but what of the hard winters? Are we helpless? Why has God given us our intelligence? Have we no means to combat the zero weather? Why! if necessary we would bring about a condition of 90° in the shade every day in the year, as Herr Weygandt has proven with his heated bee-house. If only the summers are conducive to the welfare of our bees, and the honey-producing blossoms are present, the winter is no objection. Why, I believe we could keep bees away up at the north pole if we could only get there.

Mr. Hannemann expresses his opinion of the North American and his surroundings like this:

"I esteem him highly as a man of progress; but to carry on apiculture successfully there are obstacles in his way that, with all his intelligence and ingenuity, he can never [?] hope to overcome. With steam and machinery he may be able to make very accurately his hives, etc.; but to stock them up requires a good deal of money, so it seems; and, after being stockt up, it requires the right kind of man who must be possest with love for and knowledge of the bees; he must have an extensive experience, etc. The climate must be suitable for bee-keeping so the colonies will send out a goodly number of swarms; and when these are on hand they must be mast together by forming giant colonies in order to obtain the best results. This is the only way."

The reader may ask here, "Why bring up this after 20 years have past?" Does it not show that even the wise are blind sometimes, and that half of the people do not know what the other half are doing? I write the above principally in the hope of entertaining, perhaps amusing, my bee-keeping friends, and to bring out some good points that may be of value to some of them.

I have no old grudge against Mr. Hannemann, altho I admit I felt somewhat indignant at first. That has all past. I now feel only my indebtedness to him. He was probably excusable for holding an adverse opinion of us American bee-keepers.

In criticising the Hannemann system, and in comparing it with our method, I wish to say this: The methods he pursued were probably all right for his particular environments, and much ahead of anything else known to him then; but, after all, the Yankee could and would greatly improve upon them. We would not only use the extractor, but also furnish the bees much if not all the combs needed. I am sure it would be impracticable to use the giant hives and the cages *a la* Hannemann for the production of section honey, on account of the pollen that would probably be stored in many of them. But should we pursue the Hannemann method to the letter we should probably make an article of commerce of the pollen harvested, and find a way to preserve it. I think I should sell some of it to Messrs. Perry, Olmstead, and others, who are in need of it for spring feeding.

A further improvement of the Hannemann system would be the liberal use of comb foundation, particularly with the view of preventing the rearing of the millions of useless drones that have to be sifted out and disposed of. Of course, they would make a splendid food for ducks, and I would certainly make use of them in this way if I reared them at all. Finally, I would adopt the Langstroth or Berlepsch frame instead of the bar, *a la* Dzierzon, thus preventing the mussy, disagreeable work of cutting out the honey, etc. All these are improvements of the Hannemann system, which suggest themselves to the thinking mind; with them, I believe, Hannemann might double the yield that he has been able to obtain.

I wonder what he would think of such yields as Mr. Lovesy reports in the American Bee Journal, page 452, of a bee-keeper in Salt Lake county, Utah—an average of 363 pounds of extracted; or the yield of J. P. Israel, the champion comb-honey producer of the world, reported to be 662 pounds of comb honey per colony. Such yields are phenomenal indeed. Are they true, or only "on paper?" If Mr. Hannemann has seen the photos of our honey exhibits at the Centennial, or their reproductions, he may now conclude that the North American, with his intelligence and proverbial ingenuity, can well overcome obstacles that seem unconquerable to him, which, however, existed largely in his imagination. If that does not convince him I am afraid nothing will.—Gleanings in Bee-Culture. Ontario Co., N. Y.

The Evolution of the Bee-Keeping Author.

BY M. O. PANYARD.

The bee-keeping fraternity has within its ranks more authors, contributors and literary people generally to the square inch than can be found among any other class of people in the wide world. There are in the United States 300,000 bee-keepers, and 297,327 (spring count) are contributors and authors.

If a person has no literary aspirations, and does not wish to have, he should refrain from keeping bees. If he has no literary aspirations, and yet would like to have a "few thousand," more or less, he should not neglect to procure a colony to start him off. One colony is sufficient, altho if he desires more they will be of no disadvantage. After obtaining the bees he is now on the broad highway to undying fame. The bee-keeping, would-be author carefully feels his way at first, like a child learning to walk. His first effort is usually addrest to the "Question and Answer" department of some bee-publication, and the following letter is a fair sample:

BEEDOM, Minn., May 29, 1893.

MR. EDITUR—i hav got too swarms of beas. i thot i wood rite a few lines to the Stinger as i think you hav no coruspondunt hear. i expeck my beas to swarm eny minnit. how can I tak off hunny an not git stung. if you want to winter 200 swarms of beas How big a suller will it tak. if a man hed 20 tuns of hunny what is the Best way to git the cash fur it.

Yoors truely, ALLIS LOVELY.

He now waits before again trying his hand until he has shed his milk-teeth. In the meantime he has been reading the bee-papers occasionally, and has acquired considerable confidence. He now writes thusly:

BEEDOM, Minn., Sept. 20, 1893.

EDITUR BEE-STINGER—I didn't hav eny succes with my beas this sumer. i think the reports sum mak about big yelds is exagjerated. i live hear in the best part of the united staits for beas and i didnt git *eny* hunny. i think one reson why i faled to git hunny was becaus i didnt put on eny supers till the trifolium was gon. i forgot it. and when the tilia Americana was in blum we had a long wet spell so the beas cudn't fly. the solidago, coreopsis, varioloid and erysipelas didnt do a thing this fall. i hav got a chance to swap a dubble-barrel shot-gun, laminated barrels, 12 boar, for 10 skips of beas. i think i shal do it, as the gun was a good one *once*.

Yoors truely,
ALLIS LOVELY.

Two years have now past. He has brusht some of the cobwebs from his orthography, chirography and entomology, and has become full-fledged. He now jumps upon the edge of the nest, gaps, spreads his broad wings, and soars away as follows:

BEEDOM, Minn., July 9, 1895.

EDITOR "BEE-STINGER:"—I am much gratified at the remarkable advancement that has been made during the past two years by the bee-keeping fraternity. There is room, however, for still further progress. If the gross ignorance that is manifested by a certain class of would-be bee-keepers could be eliminated from the bee-periodicals, there would be universal rejoicing. How much longer must an already long-suffering public be inflicted with the contributions of ignoramuses who are not familiar with even the *rudiments* of bee-keeping. I notice in the last issue of the "Stinger" that Spriggins, of Ohio, says, that, "in order to secure straight combs, when using the no-wall comb foundation, the frames must be wired perpendicularly, horizontally, diagonally and considerably." Now, what vile rot that is! He may be able to make novices swallow that, but he can't stuff it down an old experienced bee-keeper like me. Every person that has a grain of common sense, and upon whom Nature has bestowed any favors whatever, knows that if the hives are placed so that the frames extend north and south, straight combs will be the result.

Another idiot, whose name I disdain to mention, asks the following fool question: "I want to winter my bees in the cellar. What shall I do?" I would like to say to him that one of the essential things to do in that case, is to *place the bees in the cellar.* You can't winter bees successfully in the cellar unless you do this.

I would like to gratify you by dwelling longer upon this subject, but other duties are pressing, so I must forbear until some future time.

Yours truly,
ALLIS LOVELY.

About three years later he writes a book, entitled, "The Apis Mellifica; or a Quick Way to Amass a Fortune," which will be sent to any address, postpaid, upon receipt of 75 cents.

Something About the "Notre Dame Hive."

BY JOHN CHRYSOSTOM.

The "Notre Dame hive" is the only hive now in use in our apiary. It has given entire satisfaction. This hive will, in all probability, supersede all our loose-hanging frame hives on its own merits. It combines all the qualities of the box-hive for safe wintering and breeding up in early spring, and all the facilities of the loose-hanging frame hive for easy and safe manipulation of the frames. Moreover, nearly all loose-hanging frame hives may, by our simple device, which costs but a few cents per hive, be converted into the Notre Dame hive—even those that have bees in them.

As a closed-end or box-hive, when the frames are put in and properly spaced, the hive is contracted, holding the frames so firmly fixt in place that it may be laid on the side, or stood on end, or even inverted, and the frames will not move. Besides, not a particle of air can pass around the ends of the frames.

What about propolis and the sticking of the frames? To avoid this nuisance, to a great extent, the ends of the hive are smeared with tallow before putting in the frames. This may be done by using a thin knife much after the fashion of spreading butter on bread. The spaces between the ends of the frames, on the supports, may also be filled with tallow. All this, however, is not necessary; yet it has proven to be an advantage to the bee-masters.

It requires but about ten seconds of time to expand or contract the Notre Dame hive as desired. When expanding it, tho, it is advisable to expand it just enough to let the frames lift out easily and smoothly; so that in replacing them the bees may not get between the end of the frame and the hive. This hive is always ready to be put on the wagon or cars, because the frames cannot jar out of place. The entrance to the hive is very large when entirely open; but it can, by means of a little slide, be contracted at will to one bee-space.

What about swarming? Are not the bees more liable to swarm from box or closed-end hives? Probably, if confined to eight or ten frames. All the colonies here have a brood-chamber of 16 frames in two stories. Last spring, at fruit blooming, many colonies required 24 frames. Our bees have been watcht closely the last three summers, but during all that time we have failed to get so much as one prime swarm. The only swarms we have had were from nuclei, and colonies that had lost their queens.

We have excellent queens from various first-class breeders. The non-swarming of our bees cannot be attributed to inferior stock. It may be accounted for thus: The hives are made larger by adding frames to accommodate the bees in proportion as they multiply. In this way they always have excellent quarters. They are loath to leave such a fine hive. No swarm has ever been seen to leave our yard. About the first of July many of the colonies are on 40 frames. About this time the *Asilus aestuans*, called in English the *hornet-fly*, or vulgarly, the hawk-fly or robber-fly, makes its appearance. This species of bee-eaters abounds here. The result is, that in July and August, bees are killed by the millions. Only the most prolific queens can keep up a strong, fresh force or workers during this season.

The Notre Dame hive is not manufactured here for sale; nor do we keep any other bee-supplies for sale. We want this well understood.

I wish to take advantage of the present opportunity to thank the author of the article headed, "That Detestable Bee-Space," for the valuable hints therein given. The reading of that article set me a-thinking. I workt accordingly, and the result of my experimental labor is the Notre Dame hive—a hive in which bees can be wintered without loss, and with more real satisfaction than in any other way I know of.

[Mr. Chrysostom has written quite a good deal about his hive in the foregoing article, and yet hasn't given many particulars. If he will send a photograph of its parts and a full description, we will be pleased to publish them.—Editor.]

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Nine Interesting Questions and Answers.

1. Do bees require the same amount of syrup to build comb, as they use of honey?

2. When shall I fumigate my comb honey? and how long at a time shall I smoke it?

3. Must I melt down combs any before using again in the sections if they are neither fully built out nor capt?

4. Do you know if the great willow-herb, that Mr. Hutchinson speaks about, will grow around here?

5. Will worms bother sheets of foundation, or cakes of wax?

6. The bees have made some honey that was yellowish in color, and while bringing it into the hive they turned the wax all quite yellow. They have been working on heart's-ease and sneezeweed principally. Can you tell me what it comes from?

7. When do you put the second 8-frame story on in the spring? and what do you do with it at super time?

8. I workt for comb honey this year, and cannot decide which to run for in the future. Can you give me a few suggestions?

9. Would you use 10-frame hives for extracting? or two 8-frame hives until super-time? Illinois.

Answers.—1. Probably in building a given amount of comb they would require about the same amount of syrup as they would of honey, if the syrup is thick.

2. Fumigate it just as soon as you see little bits of white dust (the work of worms that are yet exceedingly small) on any of the sections. You will find this dust around the edges of the sections, particularly at the lower part, and on the edges of unsealed cells that have little or no honey in them. Sometimes, however, you may find the work begun right on the face of the comb. If a dead bee is present, you may find a worm on it. If you set the brimstone to burning, you may leave it closed up for 24 hours. It isn't a matter of very great exactness. It's a little difficult to know without experience just how much sulphur to use. If you use too little, and find little worms not killed, you can give a heavier dose, but if you use too much it may make the white comb look green.

3. If they are white and clean and the combs entirely empty, use them over again. But to have the combs entirely empty and fit to use again, they must be thoroughly cleaned out dry *by the bees* before any granulation has taken place. If they are left the least bit sticky, the small quantity of honey left will granulate, and that will affect the new honey that is stored in them. So if you expect to use next year any sections that are now unfilled, better let the bees have access to them right away. If you set them out so the bees can rob them out freely, they'll tear the combs all to pieces. Have the entrance to them so small that only one bee can enter at a time, then you will find them very little torn. If, however, you have a large quantity to be cleaned out, say as many as five or ten sections for each colony in the apiary, then you may expose them fully.

4. Probably not. It seems to require a soil such as is found where large forest fires have been.

5. They are not likely to do so.

6. I don't know. I don't know enough about heart's-ease and sneezeweed to know whether they would account for it. Possibly the bees may be working on goldenrod.

7. The second story is put under, not on, as soon as, or before, there is any need for more room for the queen to occupy. At time of putting on supers, the extra combs are disposed of in various ways. If there are any nuclei or colonies too weak to do good work in supers, they are called on to take care of a lot of combs. If there is no other use for them, combs containing no brood may be piled up at one end of the apiary, the bees being allowed to rob out what little honey is in them. Possibly that might not be a good plan for you if you are likely to get into trouble with robbing. Of course such combs must be watcht for worms, but generally a use is found for them before the worms can harm them much.

8. It's hard to give any suggestions, as each man must be a law unto himself. The main question is, which will bring you the most money? No one can answer that without knowing all the circumstances, and perhaps not then without an actual trial. One way is to run half for comb, half for extracted, keep close account of both, then decide which is the more profitable. Familiarity with the whole subject, and familiarity with a good text-book, will help.

9. I'm not entirely sure whether I understand fully the bearing of your question, and will be glad to have you ask again if I don't get your idea correctly. It is desirable to have only one kind of frame in the apiary, and while 8-frame hives and 10-frame hives may be used in the same apiary, so long as the frames are alike, it is better to endure some little inconvenience rather than have the two kinds. If 8-frame hives are used for comb honey, and you want to run some colonies for extracted, then for the sake of uniformity I think I should use the 8-framers also for extracting. If I cared nothing about the matter of size and weight, and the hives were not to be carried or hauled, then I might prefer the 10-framers—pretty certainly if for extracted honey only.

Phacelia—Gerstung's Theories, Etc.

1. In one of the German bee-papers, of which I can assume you are a reader, I saw a short time ago phacelia recommended as an excellent honey-plant. Do you know whether this plant has been grown in this country, and by what name?

2. Isn't the "Boiler" trying hard to make propaganda for Gerstung's theories in this country?

3. I observed an occurrence in the apiary, the like I have not seen before, and as I don't know whether I trace it to its right cause I am going to tell it to you, so that if you please you may give me your opinion about it. I was taking off supers, as no more honey was coming in, and I came to a colony which had been taken from a bee-tree about July 1; at the time of hiving them I put an empty super on to feed them a little first; but when I discovered that they commenced building comb on the cover, I placed a super with sections on instead, tho the honey-flow was about at an end. Now I found the super empty, but two of the sections were closed up with wax; no propolis on the top. I first could not think for what purpose, but after I had gotten most of the bees out and inspected more closely, I found a small cluster of bees inside of the two sections. I shook them out in front of the hive where they acted quite strange. As soon as the cluster had parted, one of them ran through the crowd and into the hive—from all appearances I judge a young virgin queen. No sooner had she entered when all the bees outside on the alighting-board placed themselves facing the hive-entrance, standing still as when hypnotized, the tail-end high up, and, I think, trembling all over, and sounding the hum of contentment.

Now, I wish to know whether I am right in claiming that the bees had a young queen in hiding up there to supersede the old one as soon as they were ready for such action, and I may have hastened the matter? or do you think there was another cause? California.

Answers.—1. I cannot give you any positive answer, but I have an impression that the phacelia in question is a plant that grows in California, and from there was introduced into Europe. The only phacelia I ever saw is a plant cultivated in the flower-garden in the North, and rarely as a house-plant, the flower somewhat resembling the heliotrope. I should be glad to know if the California phacelia is the same or anything like it. Who will tell us? I might add that the phacelia that I know is much visited by bees, and I have seen it recommended as a honey-plant in price-lists of flower-seeds.

2. Hardly. The department of "Beedom Boiled Down" I believe is intended to keep the readers informed of at least some of the things going on in all parts of the bee-keeping

world, and the mention of any new theory is by no means an endorsement thereof. I doubt whether Gerstung's theory will get any very serious following in this country.

3. Your question is not very easily answered, and one can only make a guess. It is possible you are correct in your surmise. Usually, however, when a young queen is about to supersede an old one, the young one does not seem to keep in an out-of-the-way place, but is more inclined to drive the old queen. If the old queen has a clipt wing, you can easily tell whether she has been superseded. But I think it quite probable that your old queen is still present. Young queens have a way of appearing in almost all sorts of places, even to fleeing into a neighboring hive to get away from persecution.

Comb Honey Shipt at "Owner's Risk."

Are shippers of comb honey required by the railroad companies to ship entirely at their own risk? Our station agent stamps upon the face of the bill of lading, "Owner's risk," etc., claiming that is the rule of the railroad companies in regard to honey. I crate my honey with convenient handles for carrying, and use every precaution for safety in shipping, and it seems as if I should be entitled to the same protection as shippers of other produce. PENNSYLVANIA.

ANSWER.—I think you will find it the general rule that comb honey is shipt at owner's risk. If you think you are not rightly informed as to the matter, you could get some friend at a neighboring station to inquire of his station agent.

A Number of Questions.

1. Why is it that a division-board is needed in 8-frame hives and not in the 10-frame?

2. To increase and improve stock I formed 10 small nuclei in July and August, and gave them Italian queens. If I keep them up by feeding will they be as good as new swarms next spring? and do you think it will pay?

3. Will four frames of comb be enough to winter them on if fed through the winter?

4. Bees get a flight once a week through the winter in this State. Is there anything cheaper to feed than granulated sugar? If so, what is it?

5. If bees are fed with candy, will the flavors do any harm?

6. How do queen-excluders prevent burr-comb?

7. Suppose I make hives with 10 frames 5x12 inches, and use as many stories as needed, don't you think it will be a good hive to run for extracted honey? also for a non-swarmer, if the bottom and top stories are exchanged? VIRGINIA.

ANSWERS.—1. I don't know. If the frames are of the same kind, the probability is that they are needed just as much in one as the other. If fixt frames are used, certainly division-boards should be used in either. If loose-hanging frames are used, then division-boards may or may not be used in either kind, depending on the room at the side of the hive when the frames are properly spaced.

2. Doubtful. Better double them up to make fair colonies. You can, however, keep strong nuclei or weak colonies over by having two or more in the same hive, using thin wooden division-boards to separate them.

3. Four Langstroth frames will do very well, and a colony that will cover them in winter is by no means a small nucleus. If the four combs are filled with honey the bees will hardly need feeding.

4. Perhaps not. The darker grades cost less a pound, but it is claimed that the granulated is enough stronger to make up for the difference. It might not be a bad idea for you to try one colony with cheaper sugar, and if you do please report the result.

5. I think not.

6. I don't know. Possibly by making the sections farther from the brood-combs.

7. Some like a hive of that kind. You can only tell by trying how it will suit you. As a non-swarmer it might not be better than a hive with a deeper frame?

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

BEEDOM BOILED DOWN.

Drawn Foundation.—At the Texas Convention, L. Stachelhausen showed a sample of comb honey built on drawn foundation, and all who sampled it said they could tell no difference between it and the natural product.—Southland Queen.

Queen-Rearing.—In the Southland Queen, Willie Atchley reports that he prefers for queen-rearing larvæ not more than two days old. When he used larvæ three and four days old many of the queens were drone-layers. G. F. Davidson prefers larvæ 18 to 24 hours old.

Purifying Wax.—F. L. Thompson reports in the Bee-Keepers' Review the plan of Rauchfuss Bros., with solar extractors. The pan receiving the wax below is divided into compartments with flaring sides, holding a pound each. When one compartment is full it overflows into the next. No impurities are found in any but the first.

Keeping a Record.—J. E. Crane keeps a record of 70 colonies of bees on a board 20x4x¼ inch. It has the advantage over a book that the wind doesn't blow the leaves when you are writing, and the leaves are not stuck together with bee-glue. Space is economized by using arbitrary characters to express a whole sentence by a single character. For example, a single dash means "Eggs in queen-cells."

One or More Supers for Extracting.—At the South Texas Convention, W. A. McPhail said he used only one super on extracting-colonies, as the bees filled and sealed the honey sooner. F. L. Aten uses from two to five extracting-supers, finds it keeps down swarming, and he gets more honey. Some honey will do to extract sooner than others. Cotton honey may be extracted as soon as it is gathered, in hot, dry weather, while horsemint must be half sealed.—Southland Queen.

Length of Time Larvæ are Fed.—G. M. Doolittle thinks not less than about six days, and challenges Dr. Miller, in Gleanings, to prove that five days (the time given by T. W. Cowan and some others) is correct. In moderately cool weather he found larvæ hatch from the egg in about two hours less than three days, and sealed over in six days and three hours, then emerging from the cell at 21 days from the laying of the egg. In extremely hot weather, it was nearly three days in the egg, 5¾ days in the larval, and 11¾ days in the pupa state.

Feeding Syrup.—Vernon Burt and others are reported in Gleanings as filling the brood-nest with sugar syrup, so that when the harvest came the new honey was at once carried into the super. E. E. Hasty, in Bee-Keepers' Review, thinks this practically the same thing as the thing that made him and others so bitterly assailed a few years ago. He thinks that instead of thinning the honey in the brood-combs and feeding it to the brood, the bees will take the cheaper plan of carrying up the thick "honey" from the brood-combs into the super, and use the thinner nectar for feeding brood.

Bulging of Honey in Sections.—Some difference of opinion is shown in Gleanings as to whether bees will bulge out the upper part of the comb in sections if the separator does not come clear to the top of the section. The editor is of the belief that in some places and seasons, at least, there will be bulging, so the fence separators are made in all cases to come to the top of the section. Dr. Miller insists that he has no trouble, having used the old-style section with top-bar the same as the plain section, and having no trouble about bulging. He uses little sticks ¼x⅛ to go between the ends of sections at the top, and that doesn't allow the fence to come any nearer than ¼-inch from the top of the section. The editor cites a lot of honey with edge of separator ¼-inch below the top of the section, with resultant bulging. G. M. Doolittle has for 25 years used separators coming ¼ inch below the *inside* of the topbar of the section, and finds it satisfactory. E. W. Brown reports no bulging with plain sections, and the fence coming ¼ inch below the top of the section.

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Report of the Omaha Convention is begun this week. Every member of the United States Bee-Keepers' Union will receive a copy of this journal containing the full report. It promises to be very interesting, and no doubt will be read with great profit.

◆

Question for Queen-Breeders.—A subscriber in Jamaica sends us the following question which he desires to have queen-breeders answer in the Bee Journal:

> "With what method of introducing virgin queens to nuclei are you the most successful? Also give the age of the queens."

Now if the professional queen-breeders who read this journal will kindly forward their replies promptly we will publish them all in the same issue soon.

◆

Misleading Description of Foul Brood.—Under this heading appears the following paragraph by Critic Taylor in the Bee-Keepers' Review for September:

> "In the American Bee Journal, page 502, is a description of foul brood in which I find the statement that it 'is a disease that kills the young bee in the larva [larval] state *after it has been capt over.*' Italics mine. This is a mistake that may lead some astray. To be sure, much of the brood lives till it is capt, but sometimes a large proportion dies before it is ready for that operation, and never is capt."

A glaring error, and one that never should have been allowed in the columns of this journal. Mr. McEvoy says that "in all and every case where once fairly started more brood dies of foul brood at the ages of 6, 7, 8, and 9 days than at any other age." This is in answer to the question whether he has ever known unsealed brood to die of foul brood.

The item in the Review is misleading in another sense. It makes no mention of the fact that instead of being original matter, the article containing the error was a clipping from the Pacific Rural Press.

The word "larval" in brackets shows that Mr. Taylor would use it instead of "larva." "Larval" is the better word. But there is a bare possibility that some might raise the question whether it is really an error to use the word "larva" in the place referred to. It is a noun used as an adjective. The noun "egg" is used in the same way when speaking of the egg state. Would it not be as well to say "larva or egg state" as to say "larval or egg state?" Or should one say "larval or eggal state?"

◆

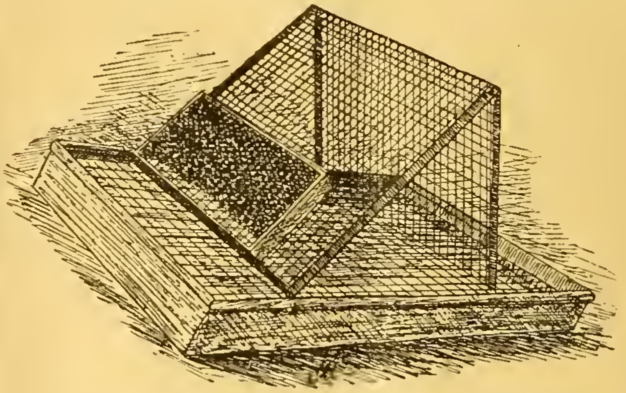
Self-Selling of Honey.—Editor Hutchinson, in the Bee-Keepers' Review, when speaking of marketing honey, had this to say:

> "The most of my honey has been sold by commission-men; for the reason that sold in this manner it would net me more than sold direct to grocers near home. Of late the price of honey in the large cities has fallen, while in our local markets it has remained about the same, hence I now find it profitable to be my own salesman; and I really enjoy it, so much so in fact that I often feel as tho I would like the business of being a 'drummer.'"

We have never had much time to spend in an attempt to sell honey, but we think we would like it very much; and were we to be suddenly "out of a job," we believe we could do well at selling honey—make a good, honest living, anyway.

◆

An Uncapping Apparatus is described and illustrated in Praktischer Wegweiser by A. Janello. A strong tin dish 20 inches long, 12 inches wide, and 6 inches high has resting in it, supported at proper distance from bottom a piece of wire-cloth with meshes 5 to the inch. On this rests a sort of roof of the same wire-cloth, the two sides of the roof allowing two operators to uncap at the same time. The slanting surface of the roof allows the combs to rest with little or no holding, and all the honey that drips is caught in the pan below. Of course the size could be varied according to the size of combs used. A larger size would do better for frames in general use in this country.



◆

The Trans-Mississippi Exposition is another World's Fair, but on a smaller scale. All industries are well represented in the exhibits, including bee-keeping, and in this latter the Exposition authorities have succeeded admirably in placing before the world a vast object lesson.

The Exposition managers acceded to the request of the bee-keepers, and erected a fine building to be devoted entirely to this work. The building is a substantial frame structure, shingle roof, with sky-lights, plastered inside and staff-coated outside; is 75x140 feet, and 16 feet high at the eaves; whitewasht ceiling, and woodwork painted white. It is nicely decorated with flags and bunting, and has glass cases on each side 4x130 feet, and 8 feet high, with glass ceiling, giving wonderful effects in the light on the honey exhibits inside.

The building is in charge of Hon. E. Whitcomb, Superintendent of Bee-Industries, who knows how.

On entering the building, to the right is found the honey exhibit of E. Kretchmer, of Iowa. In this exhibit is found some fine honey, both comb and extracted, light and dark; alfalfa, white clover, sweet clover, heart's-ease, granulated honey—anything you could wish.

By the side of Mr. Kretchmer's exhibit is the exhibit from Kansas, under the management of ex-Governor Glick. Here are products from different apiaries, all, however, showing the same styles of both comb and extracted alfalfa honey.

L. D. Stilson.

By the card overhead, we notice that the next exhibit is from the apiary of L. G. Clute, of Iowa. This is simply a mass of honey, put up without style or decoration. There are several kinds of both comb and extracted, but the style of putting up does not do justice to the honey itself.

Next in line in this case is an exhibit of comb and extracted water-white alfalfa honey, by Hon. G. W. Swink, of Colorado. This is from the celebrated melon county, and Mr. Swink tells of the wonderful increase in melon-raising since the introduction of honey-bees.

Next comes an overflow exhibit from Nebraska; then honey from Minnesota, for want of room in their regular exhibit; while Utah covers the remaining 200 square feet of the north case, with alfalfa honey, extracted and comb. It is in small jars, in large jars, and in medium-sized jars, built in pyramid forms, so as to show to fine advantage.

The central floor space of the apiary building is occupied by exhibits of apiarian goods and "bee-fixin's" to suit the most fastidious. The Leahy Manufacturing Co., of Missouri; G. B. Lewis Co., of Wisconsin; E. Kretchmer, of Iowa; and the A. I. Root Co., of Ohio, have exhibits of everything used in the practical apiarist's work. Some of these are very complete in the goods shown, and do great credit to the enterprise of the companies in keeping abreast of the times in supplying what is needed for practical work.

Minnesota has a fine glass case in the floor space, well filled with Minnesota's "best" of honey. This is shown in large glass jars, giving to all an idea of the "immensity" of their products. Dr. Jacques had charge of putting this display in place, and the whole shows the skill of his handiwork.

Douglas county, Nebr., shows its honey by itself in the east end of the south glass case, and is separate from the State display. It is in charge of Aug. Davidson, with Mrs. Price as assistant, and contains fine samples of comb and extracted honey from the various honey-resources of the county, with basswood, white and sweet clover in the lead. They also have a glass case showing honey-plants of the county, mounted, while live bees in glass hives are a constant source of amusement upstairs.

Last, but by no means least, is the display by the State of Nebraska Commission, with L. D. Stilson as Superintendent, and G. M. Whitford as assistant. This display has over 200 feet of floor space, and nearly 700 feet floor space of glass case room. Anything found in other exhibits is duplicated here, and more, too. Machinery, implements and appliances are here, and attendants to explain their uses. Honey, extracted and comb, of various colors, kinds and sizes. Good honey, better honey, of other exhibitions is duplicated in this one. The Nebraska "bees" rustled to show their products, and they have done it to perfection. Live bees in nuclei form; sweet cake, beeswax work in flowers and waxen images, vinegar, and—well, above in the cases they show about 500 specimens of common honey-plants, mounted, giving common and botanical names, with time of blossoming.

As a whole, this is without doubt the most complete and finest exhibit of the apiarian industry ever made, and shows what can be done by the hustling rustlers of the Trans-Mississippi States when they are fairly awakened.

Superintendents E. Whitcomb and L. D. Stilson are constantly in the building, and are models of kindness and accommodation to all visitors—particularly to bee-keepers.

But the whole Exposition must be seen to be fully appreciated. This is notably true of the exhibits in the apiary building. We expect soon to give in the Bee Journal some pictures of the building and contents, which we feel certain will be greatly appreciated by all.

THE WEEKLY BUDGET

Editor A. I. Root, of Gleanings in Bee-Culture, past through Chicago on his way home, Saturday, Sept. 24. He visited South Dakota after attending the Omaha convention, and on his return trip gave the Bee Journal office a short call.

Dr. C. C. Miller reports as follows in Gleanings for Sept. 15:

"I'm exceedingly thankful to say that altho the harvest was a failure, the bees are filling up nicely for winter—on cucumber, I think."

Mr. J. H. Rogers, of Carmarthanshire, England, a bee-keeper of over 40 years' experience, made us a very pleasant call Sept. 28. Mr. Rogers is acquainted with Mr. Cowan—England's best known bee-keeper—of whom he speaks in words of highest praise.

Hon. Eugene Secor, the able General Manager of the United States Bee-Keepers' Union, was selected as judge of the apiarian exhibits at the Trans-Mississippi Exposition at Omaha. He past on over 100 entries, and recommended about 90 awards. That's a big percentage. But then, they are wonderfully fine exhibits.

Pres. E. S. Lovesy, of the Utah State Bee-Keepers' Association, wrote us Sept. 23:

"As a rule this season, the flow of nectar was good while it lasted, but it continued only about half as long as in some other years. The 'old reliable' American Bee Journal is still a regular and welcome visitor."

Mr. Chas. Dadant, of the firm of Chas. Dadant & Son, spent about an hour with us when returning home Sept. 24, from a nearly seven weeks' stay in Wisconsin, where he went to get away from an attack of hay fever which "gets" him if he should remain at home in Hancock Co., Ill., during the time of ragweed blooming.

Chas. F. Muth & Son.—The following is a clipping taken from the Cincinnati Times, for Sept. 20:

"A sensational suit was filed Friday by Matilda Schaufler against Charles F. Muth & Son, August Muth, and the administratrix of the late Charles F. Muth, of the Board of Control, whose peculiar death in Indiana is recalled. Plaintiff sues on notes for money loaned as follows: For $1,500 May 4, 1897; $1,970, Sept. 1, 1897, and $2,000, Dec. 22, 1897. The money was loaned by Jacob Pistor, whose widow she is. The first note was all paid except $226, so that the amount sued for is $4,196.62, with interest. It is alleged that the firm of

Muth & Son is insolvent, that the assets are only about $5,000, and the liabilities $20,000, and that the assets are constantly depreciating in value. A receiver is therefore askt toward disposing of the stock and applying the proceeds to the payment of this and other debts of the firm."

It hardly seems possible that the above can be true. But if so, it is a very striking instance of what great changes a few years or months may make in a man's or firm's financial standing. We had been led to think for years that Muth & Son were independently wealthy.

MR. HOWARD REYNOLDS, of the firm of Reynolds & Davison, in San Diego Co., Calif., spent an hour or so in our office last week. They own 410 colonies of bees, in two apiaries, but did not get a drop of honey this year; they even have had to feed to keep their bees over winter. Last year they had a good crop. One apiary of 56 colonies was increast to 150, and averaged 325 pounds of extracted honey a colony; the other contained 85 colonies, was increast to 110, and averaged 254 pounds.

MR. AUG. WEISS, of Outagamie Co., Wis., spent several days in Chicago last week. He is one of the rising comb-foundation manufacturers, as well as a dealer in bee-supplies of all kinds. Mr. Weiss is an upright, straight-forward man. We have had considerable very satisfactory dealing with him the past two years, and, after meeting him, we are satisfied that our confidence has been well placed. We like to encourage those who are striving to do an honest business, especially those who, like Mr. Weiss, are just starting to build up a mutually safe and good business among bee-keepers.

RAMBLER JOHN H. MARTIN, of California, we understand has recently purchast a "Cleveland" bicycle, and is making good progress in learning to ride it. By this time we suppose he is able to "navigate" pretty well with it. We believe he expects "to soar" over the plains and mountains of northern California on his "bike," and ere he returns southward make a prospective trip through the gold-bearing counties of the northern part of the State in company with an old prospector, and possible strike a rich lead yet. Just think of the Rambler becoming one of the rich men of the world, all through having discovered a bonanza in the way of a gold mine! And yet it may be his luck to do so. During this trip we are informed that he hopes to do some big shooting and fishing, as he will take his rifle, camera and fishing outfit with him. There are plenty of deer and fish up there, it is reported. The honey season of 1898 is over with him.

G. M. DOOLITTLE, of Onondaga Co., N. Y., wrote us Sept. 23:

"My crop of comb honey at the out-apiary will be not far from 3,500 pounds from 30 colonies. How is that for a poor year, when others get nothing?"

Well, it's only another evidence that Doo-*little* is wrongly named. Doo-*more* or Doo-*most* would be more appropriate, we think. Mr. D. might tell the readers of the Bee Journal just how he managed that apiary in order to get such a yield. It would be an interesting story, and doubtless a helpful one to all.

MR. D. W. HEISE, of Ontario, Canada, writing us Sept. 24, said:

"While the American bee-papers are reporting honey crop failures, and higher prices, we Canadians are experiencing great difficulty in disposing of our crop at a fair price, as compared with former years. Never has honey been known to be quoted so low in the city markets, which, of course, has its effect upon the home markets. Another thing which has a tendency to lower the price is the fact of there being quite an amount of inferior honey this year to dispose of, that is, basswood and thistle mixt with honey-dew. This has quite an appreciable effect on the price of good honey."

Honey as Food is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey among should-be consumers. The forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 30 cents; 50 for 50 cents; 100 for 90 cents; 250 for $2.00; 500 for $3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

BEST

EXTRACTED HONEY FOR SALE

ALL IN 60-POUND TIN CANS.

ALFALFA HONEY

This is the famous white extracted honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

BASSWOOD HONEY

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is greatly preferred by those who like a distinct flavor in their honey.

PRICES OF EITHER ALFALFA OR BASSWOOD HONEY:

A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—One 60-pound can, 7½ cents a pound; 2 cans, 7¼ cents per pound; 4 or more cans, 7 cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. This honey is all

Absolutely Pure Bees' Honey.....

the finest of their kinds produced in this country.

We would suggest that those bee-keepers who did not produce any honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. The pamphlet, "HONEY AS FOOD," will be a great help in creating customers for honey. See prices on another page.

GEORGE W. YORK & CO., - 118 Michigan St., CHICAGO, ILL.

400 Young Golden Queens...

Warranted purely mated. just started to lay. **MUST BE SOLD SOON,** so order **QUICK.** 50 cents each; 6 for $2.75, or $5.00 per dozen. Ten years' experience with the best of breeders, and the best of methods enables me to furnish the **BEST OF QUEENS.** Safe arrival and satisfaction guaranteed.

H. G. QUIRIN, Bellevue, Ohio.
39Atf Please mention the Bee Journal.

BEES, HONEY, MONEY

Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

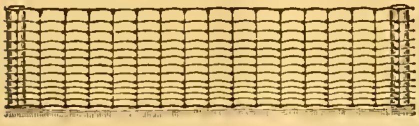
J. P. H. BROWN, Augusta, Ga.
Please mention Bee Journal when writing.

"WATCH PONDER'S AD"

SEE THAT WINK!

Bee - Supplies! ROOT'S GOODS at Root's Prices.

Ponder's Honey - Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Cat-tree. **Walter S. Ponder,**
512 Mass. Ave.,
INDIANAPOLIS, INDIANA.
Please mention Bee Journal when writing.



Turn to Page 12-58

for complete solution of "line fence" quarrels. High enough, close enough, strong enough, and cheap enough. Ask for "Fall styles and prices."
Page Woven Wire Fence Co., Adrian, Mich.
Please mention Bee Journal when writing.

ELECTRIC HANDY WAGON

EASY TO LOAD.
MADE TO LAST ALWAYS.

Our perfect knowledge of this wagon and the quality of material used in its construction leads us to declare it to be the NEATEST, STRONGEST, MOST DURABLE, LONGEST LIVED, EASIEST TO LOAD wagon made. Has our famous straight or stagger spoke

Electric Steel Wheels

Wheels have any width of tire, from 2 to 8 inches; any height, from 24 to 60 inches. Impervious to heat or cold; can't dry out, get loose or rot; NO RESETTING TIRES and repairs. Best angle steel hoonds. First class brake $4.00 extra. **All F. O. B. For $25.00** It has given universal satisfaction and will fit your requests exactly. Don't buy until you get our FREE catalogue and prices. Write for them at once.

ELECTRIC WHEEL CO. BOX 16, QUINCY, ILLS.
Please mention Bee Journal when writing.

Buy Your Sections Now

while we offer them at a **LARGE DISCOUNT,** having added to our plant one of the most complete one-piece section machines, enabling us to turn out the most beautiful sections on the market. By sending us a list of Supplies wanted we can save you $ $ $. **R. H. SCHMIDT & CO.,** Box 187, SHEBOYGAN, WIS.
Please mention Bee Journal when writing.

The A. I. Root Co.'s Goods **Wholesale. Retail.**

Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**
Cash for Beeswax. BELL BRANCH, MICH.

GENERAL ITEMS

Pretty Good Year with Bees.

I have had a pretty good year with the bees, my honey is all sold, and my bees will be all ready for the cellar in a few days; so I am going visiting for a while. The roads are good, the weather fine, and I shall enjoy a trip on my wheel among friends, relatives and bee-keepers. S. T. PETTIT.

Ontario, Canada, Sept. 22.

* * *

Plain Sections and Fences a Success.

I started in last spring with four colonies (having sold out my bees before in another place) and I have taken over 200 pounds of honey from them, and increast to 17 colonies. I gave the plain sections and fences a trial and they proved to be a perfect success with me. C. H. PETTENGELL.

Phillips Co., Kan., Sept. 20.

* * *

Feeder for Fall Feeding.

The feeder I use for feeding in the fall is made as follows: Make a box the width of the hive, and 3 inches longer by 3 inches deep. Coat the inside with paraffine so that it will not absorb the syrup or leak. Make a float of thin strips with ¼-inch spaces between the strips. Put it on level, and fill with syrup slightly warm. Lay on the float, remove the bottom-board, and put the hive on it. Such a box will hold 20 pounds, and if fed warm the bees will take it all up in one night. The float prevents any bees getting daubed. I fed a colony 18 pounds last night, and it was all cleaned out this morning, with only one dead bee in the box. This may not be new, but I never heard of one like it.

The honey crop has been a total failure for two years; everything was destroyed by caterpillars in 1897, and partly so in 1898; bad weather did the rest.

J. M. DOUDNA.

Douglass Co., Minn., Sept. 23.

* * *

Average Crop of Dark Honey.

There is not over half a crop of light honey throughout this section. The yield from buckwheat and fall flowers is somewhat better, and will probably reach nearly an average crop of dark honey.

A. D. WATSON.

Tioga Co., Pa., Sept. 12.

* * *

A Beginner's Experience.

In July, 1898, I decided to go into the bee-business. I bought 7 colonies (but didn't move them), and as I knew nothing about their management I put on my "studying cap." I remembered receiving a price-list of bee-keepers' supplies some years ago, so I began searching for it, and found it, and in that little pamphlet I saw the name of a bee-paper; I sent for a sample copy, and just kept on sending for sample copies until I had six different bee-papers. I read them all, and re-read them. It was a task to decide which one to subscribe for, because I realized I needed a bee-paper. Among them all I finally decided, and subscribed for the American Bee Journal, which I think is a grand paper. I intend to subscribe for another bee-paper as soon as I feel able.

Last Friday (Sept. 23) I moved my bees home, a distance of three miles. All workt well until we went to unload. One of the hives was old and decayed at one corner, and in setting it down I managed to make an opening in the hive, and out came the bees. They seemed to have a liking for me, as they covered me from head to foot and stung me by the thousands. I was interested in keeping them out of my eyes, but the fun continued (that is, if you could call it "fun") until I got a blanket and

Sweet Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Sweet Clover	.60	$1.00	$2.25	$4.00
Alsike Clover	.70	1.25	3.00	5.75
White Clover	.80	1.40	3.00	5.00
Alfalfa Clover	.60	1.00	2.25	4.00
Crimson Clover	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, wanted by freight.

Your orders are solicited.

GEORGE W. YORK & CO.,
118 Michigan Street, - CHICAGO, ILL.

The American Poultry Journal,

325 DEARBORN ST.,
CHICAGO, - ILL.

A Journal that is over a quarter of a century old and is still growing must possess intrinsic merit of its own, and its field must be a valuable one.

Such is the American Poultry Journal. 50 cents a year.
Please mention Bee Journal when writing.

Farm Bee-Keeping.

The only bee-paper in the United States edited exclusively in the interest of the farmer bee-keeper and the beginner is **THE BUSY BEE,** publisht by—

Emerson T. Abbott, St. Joseph, Mo.
Write for FREE SAMPLE COPY NOW.
Please mention Bee Journal when writing.

Barnes' Foot-Power Machinery.

Read what J. I. PARENT, of CHARLTON, N. Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will. Catalogue and Price-List Free.

45Ctf Address, W. F. & JOHN BARNES,
No. 995 Ruby St., Rockford, Ill.
Please mention Bee Journal when writing.

The RURAL CALIFORNIAN

Tells all about Bees in California.

The Yields and Price of Honey; the Pasturage and Nectar - Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by and expert bee-man. Besides this, the paper also tells you all about **California Agriculture and Horticulture.** $1.00 per Year; Six Months, 50 cents. Sample Copies 10 cents.

THE RURAL CALIFORNIAN,
218 N. Main St., - LOS ANGELES, CALIF.
Please mention Bee Journal when writing.

BEE-KEEPERS! Let me send you my 64-page Catalog for 1898
J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing.

HONEY ✻✻✻

If you want Colorado Alfalfa, Sweet Clover and Cleome honey—comb or extracted—correspond with the Secretary of the Colorado State Bee-Keepers' Association. Our Honey ranks high in quality. Car lots a specialty.

Address **F. RAUCHFUSS, Elyria, Colo.**
31Atf Please mention the Bee Journal

The Bee-Keeper's Guide

This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."

Given For 2 New Subscribers.

The following offer is made to PRESENT subscribers only, and no premium is also given to the two new subscribers—simply the Bee Journal for one year:

Send us **Two New Subscribers** to the Bee Journal (with $2.00), and we will mail YOU a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year —both together for only $1.75. But surely anybody can get only 2 new subscribers to the Bee Journal for a year, and thus get the boo as a premium. Let everybody try for it. Will you have one?

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

Page & Lyon Mfg. Co. New London, Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

Please mention the American Bee Journal. 7Atf

We want ....

EVERY BEE-KEEPER

......To have a copy of......

Our 1898 Catalog

☞ Send us your name and address and we will take pleasure in mailing you a copy.

G. B. LEWIS CO., WATERTOWN, WIS.

Special Agent for the Southwest—

E. T. ABBOTT, St. Joseph, Mo.

Mr. Abbott sells our Hives and Sections at factory prices.

Please mention Bee Journal when writing.

LEAHY MF'G CO. INDEFATIGABLE HIGGINSVILLE, MISSOURI.

Ho, for Omaha !

AS we have many customers in the Northwest, and believing they will appreciate the low freight rates obtained by purchasing goods from a railroad center nearer to them than we are, getting a direct through-freight rate, thus cutting the freight in half, we have establisht a branch house at 1730 South 13th St., Omaha, Neb., where we will keep a complete line of all Apiarian Supplies, the same as we do at Higginsville, Mo. With the quality of our goods, we believe most bee-keepers in the West are already acquainted, but to those who are not, we will say that our goods are par excellent. Polisht, snowy-white Sections, beautiful, straw-colored transparent Foundation, improved Smokers and Honey Extractors, and all other first-clas sgoods, are what we sell. Kind and courteous treatment and honorable dealing our motto. On these bases, we solicit an order, feeling sure that if we sell you one bill of goods you will be our customer in the future.

☞ PROGRESSIVE BEE-KEEPER, 50c per year. "Amateur Bee-Keeper," 25c. Both for 65c. postpaid. Sample copy of the PROGRESSIVE free, and a beautiful Catalog for the asking.

Address, **Leahy Manufacturing Company, Higginsville, Mo., or 1730 South 13th St., Omaha, Neb.**

Please mention Bee Journal when writing.

☞ See Honey Offer on page 634.

threw it over me; then I went to killing those under cover, and when I got through murdering bees you couldn't see my face or hands for bee-stings. My flesh swelled considerably, and I felt a little unpleasant for a few days.

I finisht unloading after the angry bees had settled down a little, and got them all in good shape. The next day I concluded I wanted some honey, so wife and I, after dinner, prepared to take it. Of course I put on the bee-veil, and my wife had on an old bonnet. You see, I knew the bees couldn't hurt that old bonnet, and I knew my face wasn't bee-proof, for I had it tried the day before. (I had a veil but didn't think to put it on when I commenced to unload the bees.)

Well, you ought to have seen us marching out to take our first honey. From the first hive we got 27 sections, well filled and capt over, and one partly filled; from the second hive 24 sections, well filled; the third hive 28 sections; the fourth hive, 24; the fifth hive, no honey above; sixth hive, 28 sections; seventh, filled but not capt over. This last one we left on.

This is more honey than we ever had seen at one time. It is as nice and as white or light as can be produced. I think my experience as a bee-keeper has been very pleasant so far — except the unloading, which might have been a little cooler for me, but I am not discouraged one bit.

H. C. KUYKENDALL.

Clark Co., Ill., Sept. 26.

Crop Better than Expected.

The honey crop here is better than I thought it would be. I have taken off, up to date, about four tons of comb and extracted honey from 70 colonies.

DAN CLUBB.

Tulare Co., Calif., Sept. 19.

Not Half a Crop of Honey.

This county has shipt out over 30 carloads of honey in one season, but this year we won't have half a crop. My bees averaged only 30 pounds per colony. The yellow butterfly is taking the honey as fast as it is secreted in the alfalfa, leaving only wild flowers for the bees to feed and breed on.

B. A. HODSELL.

Maricopa Co., Ariz., Sept. 19.

Report for Two Seasons.

Last year my bees would do nothing but swarm. I started with one colony, which cast three swarms, without storing a pound of surplus, and in about seven weeks the first swarm cast one without working any, leaving me pretty nearly disgusted with bee-keeping. From the four colonies I got 18 pounds of comb honey, but this year, with three colonies and not a single swarm, I have harvested, up to date, 138 pounds of comb honey. I attribute the difference to two reasons: 1st, better management; 2nd, the fruit-bloom was all killed this season so the bees did not get started until late in the season. The flow began suddenly after a rain, June 28. I have sold 40 pounds in town here for 15 and 20 cents a pound, and will keep the rest for home use.

E. BRASEL.

Creek Nation, Ind. T., Sept. 27.

Rather Hard on Queen-Breeders.

I started with 17 colonies in the spring, and all seemed to be in good condition when I took them out of the cellar. A cold spell came in April, and they dwindled considerably and six lost their queens, but they did fairly well after all. Considering the dry summer we have had here, they stored quite a lot of honey, but hardly any swarmed.

There is one thing practiced by a number of queen-breeders in the States that bee-keepers should expose through the American Bee Journal, and give their names. That is, advertising something wonderful, and then sending queens that are entirely worthless. One man says he is

The Biggest Offer Yet!

Last year only about one per cent —only one subscriber in 100—ordered his Review discontinued. If the Review could secure 1,000 new subscribers the present year, there is an almost absolute certainty that at least 900 of them would remain; not only next year, but for several years—as long as they are interested in bees. Once a really GOOD bee-journal visits a bee-keeper a whole year it usually becomes a permanent member of his family.

I would have no difficulty whatever in getting twice 1,000 new subscribers this year, if all of the bee-keepers in this country had read the Review the past year. I have sometimes thought that it might pay a publisher to give away his journal one year, simply for the sake of getting it into new hands. There are, of course, decided objections to such a course; but I am going to come as near to it as I dare. Here is my offer:

If you are not a subscriber to the Review, send me $1.00, and I will send you twelve back numbers, the Review the rest of this year and all of next year.

Each issue of the Review, especially if devoted to the discussion of some special topic, is really a pamphlet containing the best thoughts and experience of the best men upon the topic under discussion. Twelve back numbers of the Review are, to a certain extent, so many little books devoted to as many different phases of bee-keeping. Some issues of the Review are now out of print; of others only a few are left; while of others there are several hundred. Of course, I shall send those of which I have the most, but no two alike.

Most people subscribe for a journal at the beginning of the year. In this case there is no use of waiting, as you will get the Review for next year just the same as tho you waited until next January to subscribe, and you get all the rest of the numbers for this year FREE. The sooner you subscribe, the more free issues will you receive.

Let me tell it over once more. For $1.00 you get twelve back numbers, the Review the rest of this year, and for all of 1899.

31Dtf W. Z. HUTCHINSON, Flint, Mich.

Cash Paid for Beeswax....

This is a good time to send in your Beeswax. We are paying **25 cents a pound — CASH** — upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

You Can Learn Shorthand at Home

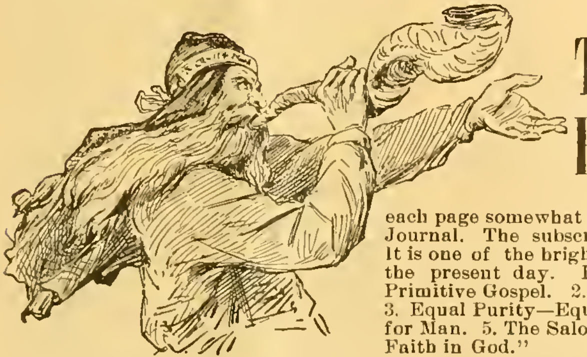
by our perfected method of giving lessons by mail. Easiest, simplest system. Send stamp for particulars.

Eclectic Shorthand College,
94 Dearborn Street, CHICAGO.
39Ay1 D. F. HAYMES, Manager.

FOR SALE CHEAP!

My property here, consisting of one block of land, new residence, a house-apiary with or without bees, a wagon and blacksmith shop —the only one in town; also an out-apiary 3½ miles away with four acres of land; ideal locations for bees; have averaged the past 5 years 105 pounds of comb honey per colony, spring count. Good pasturage for 200 or 300 colonies. **All the above MUST BE SOLD regardless of cost.** For particulars and prices address,

W. J. STAHMANN,
40A1t **WEAVER, MINN.**



The Ram's Horn... **Is an Independent Weekly Paper of 20 pages—**
each page somewhat larger than those of the Bee Journal. The subscription price is $1.50 a year. It is one of the brightest and best publications of the present day. Its "Platform" is: 1. The Primitive Gospel. 2. The Union of Christendom. 3. Equal Purity—Equal Suffrage. 4. The Sabbath for Man. 5. The Saloon Must Go. Motto: "Have Faith in God."

We will mail you a sample copy of the Ram's Horn upon receipt of a two-cent stamp.

OUR LIBERAL OFFER:

We wish to make our PRESENT subscribers to the Bee Journal a generous offer in connection with the Ram's Horn, viz: Send us **TWO NEW** subscribers for the American Bee Journal for one year (with $2.00), and we will see that the Ram's Horn is mailed you free for one year as a premium.

Or, send us $2.00 and we will mail to you the Ram's Horn and the American Bee Journal, both for one year.

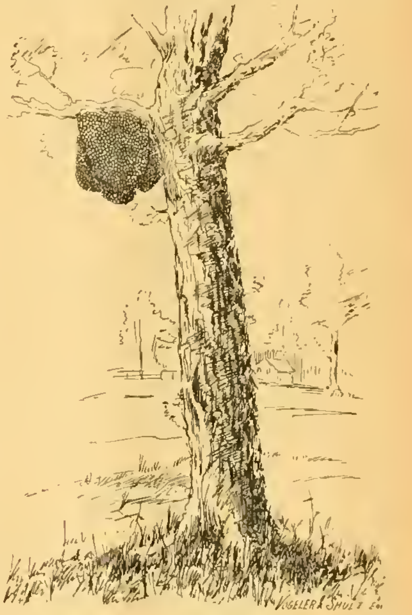
GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

always fooling his customers by giving them more than they expect. Well, he failed to fool me on that line. He fooled me the other way, by sending me a worthless queen. I put her in a strong colony, and she let the colony dwindle to nothing, and die. And there are a lot of other breeders doing the same. I sent to five different States this season for queens, and was deceived in nearly every one. One man in New York sent me his circular, in which he guarantees satisfaction. I sent to him for a queen, and paid a good price for her. She was no good, and I wrote and told him so. He replied: "Well, if the queen did not prove good, I will send you another at half price." I would not have taken another like her as a gift, if I knew what she was like. I got good queens from some breeders. J. HAMBLY.

Ontario, Canada.

A Peculiar Swarm.

I send you a sketch of a swarm of bees I found Nov. 13, 1897, as I was going through a piece of woods. It was about seven feet from the ground, on a limb. I got a box, cut combs and bees off, took them home, and transferred them into a four-frame nucleus hive. There was plenty of comb and bees, but not much honey. They did well in their new hive.


VOGELER & SHULZ Sc.

Swarm on a Limb.

A swarm like this is seldom seen in this part of the country, so I thought I would write about it, H. L. PRIMROSE.

Tompkins Co., N. Y.

Has Been a Bad Season.

The season here has been a bad one—no white clover, and cold weather now is killing goldenrod, our great fall source.

J. E. POND.

Bristol Co., Mass., Sept. 21.

Very Poor Honey Season.

It has been a very poor season for honey here. We had a frost in June that killed all the clover, and then it set in very dry, and there did not seem to be any honey in the flowers. I commenced the season with 34 colonies, increast to 84 by natural swarming; they seemed just crazy, for some of them swarmed as many as six or seven times; then I commenced to cut out queen-cells, leaving but two. Some of them did not swarm any more, and some kept on until they were queenless. I had two colonies that swarmed but once, and neither of them reared a queen.

Our main crop of honey is what we call

California ⁂

If you care to know of its Fruits, Flowers Climate or Resources, send for a Sample Copy of California's Favorite Paper—

The Pacific Rural Press

The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated $2.00 per annum. Sample Copy Free.

PACIFIC RURAL PRESS,
330 Market St., - SAN FRANCISCO, CAL.
Please mention Bee Journal when writing.

KEYSTONE DEHORNING CLIPPERS

The **Quiet, Orderly, Gentle and Safe** animal is the one that has been dehorned. It means animal comfort and that means animal profit. This knife cuts clean, no crushing or bruising. It is quick, causes least pain. Strong and lasting. Fully warranted. Highest awards World's Fair. Send for free circulars and prices before buying.
A. C. BROSIUS, Cochranville, Pa.

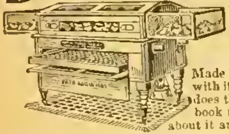
38E6t Please mention the Bee Journal.

Anyone Interested in AGRICULTURAL PURSUITS can't afford to be without the **AGRICULTURAL EPITOMIST.**

Sample copy FREE to ANY ADDRESS upon receipt of name and address plainly written on postal card naming paper in which you saw this ad. Address
AGRICULTURAL EPITOMIST, Indianapolis, Indiana.

26E26t Please mention the Bee Journal.

DON'T SWEAR as you did last season that you will buy an Incubator and then not do it. Nothing like starting right. If you want to start right and stay right buy the



Reliable Incubator.

Made so the veriest novice can't fail with it. Light the lamp, the Reliable does the rest. We send a 224 page book for 10c in stamps that tells all about it and the Reliable Poultry Farm.
RELIABLE INCB. & BROODER CO. Box B 2, Quincy, Ill.

40E5t Please mention the Bee Journal.

PATENT WIRED COMB FOUNDATION
Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation
Has No Fishbone in the Surplus Honey

Being the cleanest is usually worked the quickest of any Foundation made
J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y

Queen-Clipping Device Free

The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

GEORGE W. YORK & CO.,
CHICAGO, ILLS

COMB FOUNDATION Wholesale and Retail.
Working Wax into Foundation for CASH **A Specialty.**

Hives, Sections, and a full line of Supplies. The **best** of everything. Write for Catalog, with prices, and samples of Foundation and Sections.

BEESWAX always wanted for cash or trade.

GUS DITTMER,
AUGUSTA, WIS.
Please mention Bee Journal when writing.

here cottonweed or wild cotton, which is the same some call willowherb elsewhere.

I winter my bees in large boxes packt with chaff. I shall put in 50 colonies this fall; I think that is plenty for the location. I am 60 years old, and am not able to do any work except tend to the bees, being troubled with paralysis of the nerves.

EDWARD KNOLL.
Grey Co., Ont., Sept. 26.

Honey Crop a Failure.

The honey crop in this county was a failure this year, and unless there is feeding done there will be plenty of empty hives next spring. CHAUNCEY REYNOLDS.
Sandusky Co., Ohio, Sept. 23.

Early Honey Season a Failure.

The early honey season was a failure here. The drouth of last fall, followed by dry spring weather, so weakened the white clover crop that very little honey was gathered by the bees during the clover season; so poor was the season that the bees were ready to rob at any time. There was a smatter of honey-dew in many localities. The bees are now working actively in the forenoon on the large smartweed (heart's-ease), and all the day long on the little white aster. The odor of the aster nectar floats in the air about the apiary.

G. W. DEMAREE.
Shelby Co., Ky., Sept. 22.

Poor Honey and Cotton Crop.

The honey crop was very poor in this locality, and the little secured cannot be sold at home, as the cotton crop is very bad here and the price still worse. There is no money to buy honey with even at the lowest possible prices. J. R. JASEK.
Fayette Co., Tex., Sept. 13.

Very Poor Season for Bees.

It has been a very poor season for bees here. We will get scarcely one-third of a crop. J. Z. RHODES.
Wadena Co., Minn., Sept. 24.

Fair Honey Season.

The honey season here has been fair, with but little fall honey, which was mostly put in the brood-chamber, with little or no surplus. F. E. WYMAN.
Kewaunee Co., Wis., Sept. 26.

Care of Corn Fodder.—Every man of experience knows that the value of corn fodder as a stock food depends very largely upon storing it away in good condition. There is no other product of the farm that suffers more or deteriorates more rapidly from being wet — rained upon — than corn fodder. It therefore becomes a necessity to handle fodder with great speed and promptness when it is in condition to stack or mow away.

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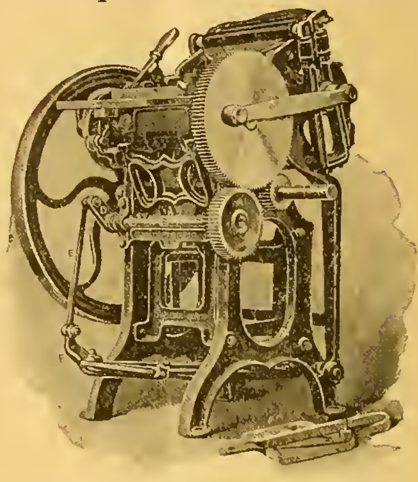

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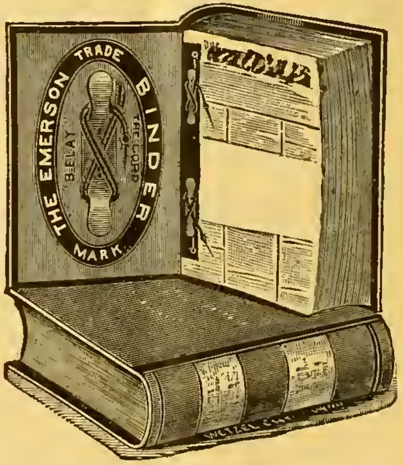

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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Sept. 20.—Honey of all kinds is selling well, with the best grades of white steady at 12c; a little fancy white clover has brought 13c. Off grades of white to amber. 10 to 11c; the dark shades, 8 to 9c. Extracted, 6 to 7c for white; ambers, 5 to 6c; and dark, 5c. Beeswax steady at 27c.
R. A. BURNETT & CO.

St. Louis, Sept. 9.—Fancy white comb, 12 to 12½c.; A No. 1 white, 10 to 11c; No. 1 white, 9 to 10c.; dark and partially-filled from 5 to 8c, as to quality. Extracted in cases, No. 1 white, 6 to 6½c; No. 2, 5½c; amber, 5c; in barrels, No. 1 white, 5½c; amber, 4¼ to 5c; dark, 4 to 4½c. Choice Beeswax, prime, 24c; choice, 24½c. At present there is a good demand for honey. WESTCOTT COM. CO.

Kansas City, Sept. 9.—Fancy white comb, 12@13c; No. 1, 11@12c; amber, 10@11c. Extracted, white, 5½@6c; amber, 5@5½c; dark, 4½@5c. Beeswax, 22@25c.

The receipts of comb honey are larger.
C. C. CLEMONS & CO.

Boston, Sept. 30.—Our honey market shows a decided firmer tone since our last. A few sales have been made at 15c for an extra fancy lot, while almost all sales ranging from A No. 1 to fancy now are made at 14c, while occasionally, something a little off, will bring as low as 12½ to 13c. We do not look to see any lower prices.

Extracted, Florida, in barrels, mostly 6c to 7c, with a good demand. Beeswax, slow sale at 26c for best. BLAKE, SCOTT & LEE.

Indianapolis, Oct. 3.—Fancy white comb honey, 12 to 12½c; No 1, 10 to 11c. Demand fairly good. Tar-colored comb honey, 8 to 9c, with almost no demand. Clover and basswood extracted honey, 6½to7c Beeswax 25 to 27c.
WALTER S. POUDER.

Milwaukee, Sept. 20.—Fancy comb, 12 to 12½c; A No. 1, 11 to 12c; No. 1, 10 to 11c; dark and amber, 8 to 10c Extracted, in barrels and kegs, white, 5½ to 6c; dark, 5 to 5½c. Beeswax, 25 to 26c.

The condition of this market for honey is favorable for shippers of good quality either in comb or extracted, and the receipts, while they are with us very fair, are not as liberal as may be, while the demand is very fair at our quotations. We advise liberal shipments of 1-pound sections and extracted.
A. V. BISHOP & CO.

Buffalo, Sept. 16.—There is quite an improved demand for honey at present, and moderate amounts can be sold of strictly fancy 1 pound comb at 11 to 12c; lower grades range from 10c downward. We advise but moderate shipments for awhile yet. Extracted—average grades could be sold at 4 to 5c. Fancy beeswax, 27 to 28c; common, 20 to 25c. BATTERSON & CO.

Columbus, O., Sept. 28.—Fancy white comb, 14 to 15c; No. 1 white, 12 to 13c; No. 2 white, 10 to 11c; amber, 8 to 10c. Extracted, 5½ to 7c.

There still exists a scarcity of white comb, and holders who contemplate using this market should do so early.
COLUMBUS COM. AND STORAGE CO.

New York, Sept. 26.—Comb honey continues to arrive freely. Demand is good for nearly all grades at following prices; Fancy white, 14c; No. 1, 12c; amber, 10c; buckwheat, 8 to 9c; an exceptional quality at 9½c. There is a good demand for extracted, all kinds, at 6½c for white, and 5½c for light amber in cans; Southern, in barrels, 55 to 58c a gallon. Beeswax dull at 26c.
HILDRETH BROS. & SEGELKEN.

San Francisco, Sept. 14.—White comb, 9 to 9½c; amber, 7 to 8½c. Extracted, white, 6½@6¾c.; light amber, 5½ to 6c. Beeswax, 24@27c

Stocks are light of both comb and extracted, but more especially so of choice extracted, the latter being in most active request. Market is firm at the quotations, with holders disposed in most instances to ask somewhat higher figures.

Cleveland, Sept. 1.—Fancy white, 13@14c; No. 1, white, 12@12½c; light amber, 11c; buckwheat, 9c. Extracted, white, 7c.; light amber, 6c.

The demand for honey is exceptionally good, owing to the crop in this vicinity being very light. A. B. WILLIAMS & CO.

Detroit, Sept. 24.—Fancy white, 11@12c; A No. 1, 10@11c; No. 1, 10c; fancy dark or amber, 9@10c; other grades, 8@9c. Extracted, white, 6@6½c; dark or amber, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

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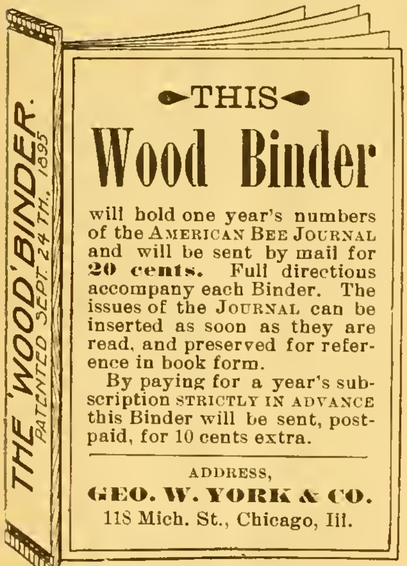

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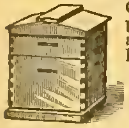

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38th Year. CHICAGO, ILL., OCTOBER 13, 1898. No. 41.

CONVENTION PROCEEDINGS

UNITED STATES BEE-KEEPERS' UNION.

Report of the 29th Annual Convention Held at Omaha, Nebr., Sept. 13-15, 1898.

DR. A. B. MASON, SEC.

[Continued from page 627.]

FIRST DAY—AFTERNOON SESSION.

The convention was called to order at 1:30 p.m., the session being opened with the singing of "Bee-Keepers' Convention Song."

In the absence of Mr. W. F. Marks, of New York, the Secretary read his paper, entitled,

Organization Among Bee-Keepers.

Your humble servant can in no wise add to the many excellent articles that have appeared on this subject from time to time; no one realizes that more than himself, but the subject is an important one.

The bee-keepers of the United States should aim to have the best organization in the country, and unless I am very much mistaken there is no good reason why they should not succeed. You may say, "Easier said than done;" to be sure, but "nothing without labor." The first questions then are: How shall we proceed? How can we get the bee-keepers interested? We cannot hope to succeed unless we first get them interested. I would not advise any new or untried plan. Neither would I advise any plan that has been tried in the past and failed. We can look around us and see many successful organizations; let us profit by their experience and adopt a system of organization that has proven successful.

We should look around us, take the most successful organization we can find for a pattern, adopt its plan, and just go to work and excel it.

There is a prevailing idea that what we need is a fat treasury; it is not necessary to a good organization. I would rather enter a battle for our pursuit with one hundred thousand bee-keepers at my back than with as many dollars in the treasury, backt perhaps by one-tenth that number of bee-keepers. Money alone cuts a poor figure in such an organization, unless backt by commanding influence. With one hundred thousand—aye, one-half that number of interested bee-keepers behind us there would be powerful influence, and no lack of funds.

You will observe that all successful organizations extend their order into nearly every town, village and hamlet; so must we, if we would succeed. We must get the bee-keepers interested in the work, by forming, or encouraging the formation, of local societies; such a course will give them a personal interest in the undertaking. A little reflection will convince you that the interest in our organization at the present time is strongest in those localities where there are local organizations.

In conclusion, I will repeat, we must profit by the experience of others, adopt some popular and successful plan of organization, and go to work systematically, determined to succeed. W. F. MARKS.

There was then a discussion of the subjects of co-operation and organization among bee-keepers; both subjects being considered together as follows:

Dr. C. C. Miller—In order to have the procession move I will give one thought, and that is, that I believe the one thing we ought to do above all others is to press for membership in the Union, independent of attendance at the conventions. There is our weak point. We have in the past had many good conventions, but our membership has always been a fleeting one. The rule has been that only those who attended the conventions became members. We have gotten out of that track a little; but we want to get out of it entirely. Every one who becomes a member once should be a member continuously, year after year. And then we should urge persistently and continuously that all bee-keepers become members of the Union. That is the one thing more than anything else, perhaps, that we need now.

Mr. C. N. White, of England—See wage 647.

Pres. York—Perhaps methods of securing membership might be suggested.

E. R. Root—The paper speaks about local organizations. There is no State that has so many local organizations as New

York. I was greatly surprised to see how many local organizations they had. There is one of them in Seneca county that has a membership of something like 75, and they meet once a month during the honey season. In the county adjoining that they had an organization with something like 60 members. In Otsego county and Tompkins county they have local organizations. Tompkins county has a local membership of something like a hundred. I think there are something like a dozen counties well organized. Mr. Marks speaks about local organizations affiliating with parent organizations. I doubt whether that could be done in States where bee-keeping is not so extensively practiced as in New York. There is scarcely a farmer in those counties that does not keep some bees. In each one of those organizations they recommend bee-keepers to take some bee-paper, or to become members of the United States Bee-Keepers' Union. I think you will find the membership from that State is greater than from any other, probably due to that one fact.

Mr. Lathrop—We have several bee-keepers' organizations in Wisconsin, some of them quite prosperous, and I understand that there are some more being organized this year. A good many of our bee-keepers in southern Wisconsin have been members of the National Bee-Keepers' Union, and we voted to recommend that the two organizations should be combined, but our members are slow to join the United States Bee-Keepers' Union while they are members in the other, and while they have paid their dues. I never joined this Union until to-day because I was a member of the other organization, and I believe that up to the present time the work has been all right, and I had the protection I needed in that organization. I would like to see the membership in the National Bee-Keepers' Union come into this, so that we could all be together. I think that would be a good step towards what you are talking about now.

Dr. Mason—You say that the old Union has furnisht you all the protection you needed. What do you mean by that? What protection does it furnish?

Mr. Lathrop—Well, it is like life insurance. It never did anything for me, but I always felt that I had something to fall back upon in case of emergency.

Dr. Mason—What would the emergency be?

Mr. Lathrop—There might be an emergency. I have one apiary that I have had 13 years in a certain place, adjoining another man's property. It is not near a public highway, but the man who owns the land cultivates corn there. He said the bees bothered his horses, but that he would try to work, and if he couldn't work then he would do something else—he would try to have the bees removed as a nuisance, or something of that kind. I put up a high board fence, and took all the precautions I could. I expected to have a lawsuit, and I understood that if I did the Union would fight it for me. I was speaking of the National Bee-Keepers' Union.

Pres. York—I should like to ask Mr. Lathrop why he would not receive the same protection by being a member of the United States Bee-Keepers' Union?

Mr. Lathrop—I think I would. As I had membership in the other I thought it would be all right for the time being, because it had always done good work and been successful.

Dr. Miller—I am not going to give anything new at all, but I want to say that I think one of the greatest things to help increase the membership is the influence of the bee-papers. They have done good work, and I believe that a continuance of that same work, and possibly a little more work on that same line, will do great good. Possibly they need a little encouragement by knowing that we recognize their work. Then it might be a good thing for those who write to the papers to mention the matter and urge that all should become members of this Union. I very much doubt whether there is any one thing that will do as much to increase the membership as that. I believe the bee-papers could do more than they have done. They have, of course, done more than they are paid for doing; but I believe that if they will do a little more yet it will do good.

Dr. Mason—The editors of nearly all the bee-papers have said to me, "Whenever you have anything in the line of the work of the United States Bee-Keepers' Union, let us have it." I think we all feel under obligations to the bee-periodicals. If Mr. Root wasn't here I would say that we are a little more indebted to the American Bee Journal than we are to Gleanings. Editor Merrill, former editor of the American Bee-Keeper, pitcht into Mr. York and myself rough-shod when this Union was first started, for the part we took in its organization, but the new editor, Mr. H. E. Hill, is doing all he can for the Union, and is ready to do more. On the first page of our program is a cut that Editor Hill got up and loaned to us for use in printing the program. I for one feel very grateful to him. Dr. Miller talks about the papers doing more than they are paid for. We don't pay them anything. Editor Hutchinson, of the Bee-Keepers' Review, does all he can to aid the Union, and Editor Holtermann, of the Canadian Bee Journal, speaks a good word for us whenever he can.

Dr. Miller—I do think they can do a little more if they want to, and I don't think we ought to do anything to stop them.

Pres. York—Perhaps it would be all right if I askt Dr. Miller to tell the publishers in what way they can be more useful. There are some things that publishers "don't know," the same as with Dr. Miller. (Laughter.)

Dr. Miller—In reply to that I would say that they might do a little more of what they have been doing, or perhaps do it a little oftener. The quality has been good, but the quantity might be increast a little. Not that I am finding fault at all, but a little more of the same kind would do more good. I am only saying this in order to encourage them by making them feel that their work is not without result. They certainly have done more than ought reasonably to be expected of them. I believe that the lack is rather on the part of those who write for the journals. We ought ourselves to give them something oftener, and not depend upon them to furnish the material and the place to publish it.

Pres. York—I think one great help to the publishers would be this: Let the Union do some real, active work, and we will report it. That, I think, would help more than anything else to increase the membership.

Dr. Mason—I might say that Mr. Marks, at my suggestion two years ago, when we were trying to organize this Union, sent me a constitution, and in it he embodied these thoughts of his in detail about starting up local organizations. But it seems that it is not feasible; so many of our people are selfish. I may feel that I do not need to pay a dollar to be protected, because I can take care of my own affairs better than the Union can; but I feel that I am under obligations to the fraternity in helping to do away with the adulteration of foods. That is the reason I gave my dollar a year.

Frank Rauchfuss (Colo.)—I am of the same opinion as Mr. Marks, that we should organize county and State organizations; they should be the center, and the national organization should be the head. That is the way I have been talking at home. I really think it is feasible, because I have seen what has been accomplisht in Germany. It is done there, and I don't see any reason why it should not be done here.

Dr. Mason—Are there not a great many more bee-keepers in Germany than there are here in proportion to the inhabitants? and aren't they closer together?

Mr. Rauchfuss—Yes, sir; and they are a different class of people; they are mostly teachers, preachers, and wealthy farmers, who can afford to spend a little money in going to meetings, and things like that.

Dr. Miller—Mr. Rauchfuss will remember that there are dozens and dozens of those who never attend the meetings and yet are members. There is where the Germans have got the start of us. With us it is too often the case that only those are members who attend the conventions; but those plodding Germans stick to it, year after year, and if they never go to the conventions in their lives but once or twice, all the rest of the time they are members. They have large societies and large meetings, but the meetings only take in a small part of the membership. While I am willing to have the Germans come in here with us, I would like to beat them in some things. If we could only beat them in that respect, I would like it very much.

Mr. Rauchfuss—Our Colorado association has workt under the same serious difficulties. We have a small membership, and I have been trying to get the membership up. I had some help from the American Bee Journal, and we appreciated it very much. We have done this much: Every one that is a member of the State organization derives some benefit in buying his bee-supplies. That is what gets them. If they see that by paying 50 cents for membership they can save $5, they will come in every time. We have 150 members, and more coming.

Dr. Mason—Last year the Secretary of the Salt River Valley Bee-Keepers' Association (in Arizona) sent me 17 names and $17. This year he sent 14 names and $14, and some names had been sent before that. None of them have attended our conventions. They are too far away to make it convenient to attend. I don't know but it would be a good plan if your next Secretary would write this matter up and put it in the papers. I believe that we can organize as the Colorado folks are doing.

Mr. Rauchfuss—There is another way: Start a case—prosecute somebody for adulteration, and show the bee-keepers that we are doing something with the money that has been paid in, and that will induce others to get sufficient courage to join.

Dr. Mason—We don't have any need for that in Ohio, so far as adulterated honey is concerned. We have a first-class State law, and a first-class man as Commissioner to see that it is carried out. I have been watching for the last two years for some one to prosecute, so as to get the glory for the Union, but I can't find any one dealing in adulterated honey except such as is labeled as required by our excellent "Pure Food" law.

Mr. Whitcomb—The best plan for getting members for the Union that I have found, is, when you go out and meet your brother bee-keepers, talk to them. Every member that is here to-day can get two or three of his bee-keeping friends who are not members to come in. We must have a fund before we can commence prosecutions. It takes money to conduct a prosecution, and we need to have a good fund first. That is what we have been waiting for, to get the membership strong, and to get a fund before commencing that work. We must not make a failure of the first prosecution. When we get a good membership and get money in the treasury, then we can go ahead and prosecute and do some good work. I know of no better way than for every brother and sister who is a member of the organization to go home and get some of their bee-keeping friends to join—send in their dollars, and have them become members. That would swell the treasury and the membership admirably.

Questions were then taken up for discussion as follows:

BEE-KEEPING, PUBLISHING OR MANUFACTURING.

"Which is the most profitable, keeping bees for honey, publishing a bee-paper, or manufacturing bee-supplies?"

A. I. Root—Whether you are going to keep bees for honey, or publish a journal, or manufacture supplies, you can't succeed in any one of them unless you put brains and muscle into it. When I look back over the years that I have been engaged in the work—and I believe I have made a success in all three departments—I would say that I succeeded because I put brains, hard work and energy into each. If the rest of the world don't know how many hours I put in, Mrs. Root does. She said again and again that I would work myself out, and kill myself. But it is better to wear out than to rust out. I kept bees for honey, and had lots of hardship and worry. My early experience was a series of blunders, but little by little I began to get the upper hand. When a man goes into a certain business and puts his whole life and energy into it, he will sooner or later get his reward. Whatever you are doing, you want to do it with all your might. I don't think publishing a bee-paper would have been profitable if I hadn't put energy and soul into it. But I made a success of it. We had to make a success of honey-production and of bee-papers before there was any field for the manufacturing business. Years ago, when I first started, and when the people were all feeling sorry for me because I had let this new craze run away with me, I said, "Look here, gentlemen, the time is coming when the bee-keeping industry is going to rank fairly with the butter and egg business." I had some pretty lofty aspirations. I had faith in strength and energy, and I had faith in the great God above. Faith is a great thing. The one who has faith in God, and faith in his own brain and muscle, is the one who is going to succeed. It seems to me it doesn't make so much difference what you are working at if you are working at it with all your might. And in regard to wearing one's self out, I don't believe I have felt so young and spry as I have in the last four or five months.

There is another point I want to make. There was one time in bee-keeping when I had made a fair success, and then we had seasons like the past. We had all sorts of discouragements and mishaps, and I had about decided to give it up. I piled away my books and papers, and sort of felt that I would quit. Mrs. Root rather remonstrated with me, saying, "You don't want to throw away what you have done. I would just go on, and may be you will have a better honey season." There were only 11 colonies left. I thought it was a good time to "wind up," but she didn't like the idea of my giving up. The next year I increast those 11 colonies to 44, and the next year with those 44 I got that big crop of honey—over 6,000 pounds. Don't turn your back and show the white feather. If I had quit I would have lost faith in myself, and may be lost faith in God. Then I would have started in some other kind of business kind of half-hearted, and likely made a failure of it, too. Don't give up on account of a few failures, or a succession of failures. I have known some who have been at it four or five years, and said they were ready to quit, whereas if they held on a little longer it would have been like the man who was sinking the oil-well. He had gone down a good ways and hadn't struck any oil yet, and he was getting discouraged; and then some one bought the well and sent it down only another foot, *and struck oil*. That is just the way with bee-keeping. When you get ready to say it doesn't pay, and lose faith in man and God, it is a bad place to be. Stick to your trade, stick to your religion, and stick to your faith in God, and to your faith in your neighbors. What is that old text? "Be not weary in well doing, and in due time you will reap if you faint not."

Pres. York—I presume that Mr. Root is the only one that can answer the whole question. He has been through all of of it. But he has not answered it yet, as to which is the most profitable.

A. I. Root—They all have their ups and downs, and I might say that it is not an easy matter to make a success in any one of them.

E. R. Root—I don't know that I can answer the question, but I will say this: I wrote to Mr. John H. Martin, of California, and askt him why there wasn't a bee-paper publisht on the Pacific Coast, and he said they told him it was more profitable to produce honey. I presume that was the fact. I don't think that in our locality in Ohio we could produce honey and make a big thing out of it. Perhaps it is more profitable to produce supplies.

A. I. Root—But there is a young bee-keeper only a couple of miles from us that has produced profitable crops of honey year after year.

Pres. York—Last year in Chicago I averaged 100 pounds of honey to the colony. As to the second part of the question, I am publishing a bee-paper, but I have not found that there is so very much money in it. Perhaps when I get to the third part of the question I will make some money! I think as Mr. Root says, it depends a great deal upon the man in any case.

Dr. Miller—With regard to one point brought out: I am not so sure that it is right to throw your whole soul and might into it. There are some things, perhaps only a few, where it is wise to throw your whole might into them, but I very much doubt whether bee-keeping is one of the things. I have in mind a case that I knew years ago, of a man who was very enthusiastic about bee-keeping. He went into it all over; he workt so hard at it that his soul was worn out in course of time. Then he almost abandoned it entirely, instead of going on and making use of the advantage of his experience. He practically deserted the brotherhood, and then went into publishing a paper. He threw his whole soul into that, and made one of the best papers that could be publisht; yet if it had not been for the new generation following him, in course of time that would have been deserted utterly. Fortunately the rising generation took that off of his hands and continued it successfully. Then he went into the business of producing supplies, and he made a big success of that—went into it with his whole soul; but if it had not been for the rising generation that would have been deserted entirely. Then he went running off after cabbages, and I don't know but he has made a success of that. If instead of throwing his whole soul into bee-keeping and allowing the hobby to run away with him—throwing the reins to the wind, instead of controlling it as he might have done—I believe to-day we might have gotten a great deal more from him than we have. I believe the Lord gave to him ability that He did not give to the ordinary members of the human family. I believe one thing we are to do is to hold a firm grip on the reins of the hobby that starts with us. When I find that bee-keeping occupies the whole of my time, then I want to let it go to a certain extent and take something else with it.

DEPENDING ENTIRELY UPON BEE-CULTURE.

"How many of the members present depend entirely upon bees and honey to make their living?"

On a call for a showing of hands, two responded in the affirmative.

Dr. Miller—My living is all made by what I know about bees, but it is not all made by working directly with bees.

J. S. Scott—I understand that does not mean the production of honey from the bee. I buy and sell honey as well as produce it. I don't produce honey to the extent of making my entire living out of it.

Dr. Miller—In a certain sense that would allow Mr. Scott to hold up his hand as well as myself—that is, we depend entirely upon bees and honey for our living. Wipe away all bees and honey and we are dropt to the ground.

ACTUAL COST OF A POUND OF HONEY.

"What does it cost to produce comb honey; also extracted honey?"

Pres. York—Perhaps the question should include the words "per pound" in order to enable us to get at it.

Mr. Danzenbaker—I don't see that there is much difference, in my experience. Years ago I had an extractor and used it seven or eight years and then sold it. Then I bought another after five years, and I had it for four years without unpacking it, for the reason that I was getting all the comb honey that I thought the bees should store. The year before this I produced perhaps 120 pounds of honey that I didn't succeed in getting into comb honey; this year none—all comb honey. What it costs I cannot say; it depends on the number of bees in one place. Some say that 100 colonies can be kept in one place. I think 10 will do much better. This year there were 14 colonies in box-hives only two miles from where I had 90. I made a bargain with a man that I would give him the hives if he would let me have all the honey I could produce to May 20. I transferred the bees, having a man to help. That took two days. I got a sugar-barrel full of honey. I put on sections and got 900 finisht sections from the 14 colonies. I think I went but once a week to that yard —perhaps six times in all. I can't say what it cost. I don't think I could have got more honey if I had extracted. I bought the foundation; that is all paid out. I got $135 for the honey from the 14 colonies. I did better with them than in the yard where I was working with the bees every day, where there were 90 colonies. That is the result of a few hives in a place. I had a few bees in a place that paid $15 to $20 a colony. This year there was a man that had 100 colonies and he got a fair crop. I had a yard about two miles from it, and I got four times as much, but I hadn't so many bees. I have been at Medina. Look at the number of colonies in that yard for queen-rearing. I don't think a neighbor could succeed there if he had only one colony. It takes all the honey there is to keep breeding bees. The cost of honey depends upon the situation. I know some places there is no profit in it. In the case I spoke about, with the 14 colonies, the hives were worth $1 apiece. It took us three days to transfer, and six days work in getting the honey. That was nine days altogether. I got $135 worth of honey.

Mr. Cameron—Suppose you have a case where you spend $40 for supplies and don't get any honey; then how much does it cost a pound? (Laughter.)

Mr. Whitcomb—It takes 15 pounds of honey to produce a pound of comb. In this locality I doubt whether we can produce comb honey profitably for less than 15 cents per pound, while we can produce extracted honey for 5 cents. The bees haven't time to put up comb in the fall, when the heart's-ease is yielding. We are compelled to produce more extracted honey than comb honey here, because there isn't time to build the comb when the honey is flowing. The 15 pounds of honey it takes to build a pound of comb is certainly worth something. Honey-comb isn't gathered, it must be built. It takes the time of the bees, and it takes material. I doubt whether a pound of comb honey can be produced profitably in this section for less than 15 cents. I would rather produce extracted honey at 5 cents, so far as profit goes, than comb honey at 15 cents. Of course, a great many out here produce comb honey, but very little of it. I doubt whether in the great alfalfa districts of the West, where the honey comes in at times very rapidly, it is not more profitable to produce extracted honey than comb honey. Here we sell more extracted honey than we do of comb, because here our customers take a gallon of the extracted honey at a time, where perhaps otherwise we would sell them a pound. They buy it cheaper, of course. They know it is as pure as the honey they buy in the comb.

A. I. Root—In Arizona, where they have those great alfalfa regions, immense quantities of honey are produced. There was one apiary of 300 colonies in one spot that produced 200 pounds to the colony. The man told me that if somebody would take the honey off of his hands at 3 cents a pound, he would go ahead. He figured that he could produce it at 3 cents a pound and make a success of it—that is, extracting. All he got over the 3 cents he counted as profit.

Mr. Cameron—I remember that a long time ago Dr. Gallup publisht the statement that he got out of one colony 50 pounds per day. You can't get 50 pounds of comb honey in a day. I don't believe it.

Dr. Mason—If there is one honey-producer that we feel we can rely upon in his statements it is Dr. Gallup. Dr. Gallup got in 30 days 600 pounds from one colony. Dr. Gallup don't lie.

Mr. Cameron—He couldn't get comb honey at that rate.

Mr. Rauchfuss—In regard to the cost of producing comb and extracted honey, we had some discussion at one of our State meetings four or five years ago, and it was estimated then—and those estimates were given by specialists—that it costs 4 cents to produce extracted honey, and 7 to 8 cents for comb honey.

KEEPING BEES NEAR CULTIVATED CROPS.

"Can a bee-keeper be forced to remove an apiary because the land adjoining is used for cultivated crops, provided the bees are on his own land, are not near a public highway, nor any dwelling, and also separated from the adjoining property by a high, tight board fence, the claim being that the bees sting men and horses?"

Dr. C. C. Miller—That is a question of law. It might be answered very differently in different States. I do not believe that we are competent authority to answer that question. We may waste time by discussing questions that do not properly belong here. There are things that can be better discust in the bee-papers, and there are things that we can better discuss here face to face. I think our time can be better occupied than in discussing this. If any one knows the answer of course we will be glad to hear it, but I do not think we are wise in spending time to say what we *think* ought to be the answer.

HOW MUCH EXTRACTED TO PRODUCE A POUND OF COMB HONEY—FEEDING BACK.

"How many pounds of extracted honey does it take to produce one pound of comb honey?"

Mr. Danzenbaker—I suppose that means the relative quantity that the colony will produce of each. In June and July, in the warm weather, I think the bees will make the wax they need to put the honey in. In the fall they do not generate so much wax. A man who is producing extracted honey in the cool weather would have the advantage. In my experience in June and July I claim I can make more money on comb honey than on extracted The young bees in the hive are elaborating the wax and molding it into the comb to put the honey in that the field-workers bring in. It depends on the season.

Pres. York—The person who askt the question may have been thinking of feeding back: how many pounds of extracted honey must be fed to produce a pound of comb honey?

Mr. Danzenbaker—I don't think it would pay to do it.

A. I. Root—The question about feeding sugar to make honey comes in here. I believe we are all decided that it does not pay, even if it is honest.

E. R. Root—It has been stated in the books that it takes 20 pounds of extracted honey to produce one pound of honey-comb.

Dr. Mason—If I had completed an experiment I had begun, I could have said something about this. I do know this, that within the last 15 days I fed about 35 pounds of extracted honey, and I have taken about 40 pounds of comb honey from it. Saturday evening I raised up two supers of plain sections I had on the hive—24 sections in each one, 48 sections in all—and they felt as if they weighed 50 pounds. I put on a bee-escape, hoping to get time to find out something about it, but I didn't. I am quite sure those 48 sections are well filled. Other colonies were by the side of that, and gaining some, but not very much. They got more honey than I fed to them. I am going to look at it when I get home, and then I will report.

TEST TO DETECT GLUCOSE ADULTERATION.

H. L. Miller—I should like to ask if there is any way of testing honey to know if there is glucose in it.

E. R. Root—Certainly, there are several ways known now. Mr. Selzer, of Philadelphia, has made a specialty of it. He says he can tell without doubt whether a sample of honey contains glucose, and very nearly the percentage, by chemical means.

H. L. Miller—People generally don't have those means to use. I understand that by putting the glucose into tea, it will turn the tea dark. If that is true, I should think that would be as good a way as any.

Eugene Secor—I don't know of any way of testing except chemically—analytically.

An Attendant—Does glucose candy like honey?

Dr. Mason—It will candy, but not like honey. I have got two gallons candied.

[Continued next week.]

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

CONTRIBUTED ARTICLES

Best Hive for Farmers—Box or Frame?

G. M. DOOLITTLE.

A correspondent writes that he has been induced to take the American Bee Journal, and after reading some of my articles, and those of others, he has become interested in bees. He says he is a farmer and wishes me to write an article on the best style of hive, with the management of the same, for the farmers who may keep a few colonies of bees, for he thinks there may be many other farmer bee-keepers among the readers of the Bee Journal besides himself.

In complying with this request, I would say that all depends upon how "the farmer" intends to keep his bees, and what time he expects to spend on them. If he intends only to hive the swarms when they issue, and put on the surplus arrangement when the white clover commences to bloom, paying little or no attention to them otherwise (which is the way the average farmer tends to the bees), then I would say that the box-hive, formerly known as the "Miner hive," is as good for such an one as any hive in existence.

Why I single out this hive from the hundreds of other box-hives or log-gums of the past, is, that the top was so arranged that by the removal of a "honey-board" the surplus arrangement could be set immediately over the combs, thus placing no more barrier in the way of the bees in entering the sections than there is with the best hive ever invented; and should our farmer ever want to sell his bees, they will bring from 50 cents to $1.00 more per hive than they would in any of the others, on account of the provision Mr. Miner made of slats standing with the knife-like edge down, so that the bees nearly, if not quite always, build their combs straight and true, so that, when they come into the possession of the practical bee-master, they are easily transferred to any of the movable-frame hives.

If, on the other hand, the farmer is willing to give the bees the attention which they require—which is far less than he would give one of his horses or cows—then I would say that nothing short of a good movable-frame hive will be good enough for him. As to which of the frame hives is best, I would say, much depends on the locality in which we live. If in the South, then the Langstroth or even shallower frames will do as well as any; but if north of latitude 42° to 45°, then I would prefer a deeper frame, if the bees are to be wintered on the summer stands. Of course, chaff-packing will help the shallow frame hive; but I believe it is something conceded by all, that a deep frame is preferable for the extreme North, where bees are to be wintered out-of-doors.

A hive which will bring the colonies out strong in the spring is something worth looking after, where the crop of white honey comes early in the season, as it always does where white clover is the chief source of supply, and the hive which accomplishes this item the most perfectly, is the one the farmer, or any other person keeping bees, should look after. Lots of bees in time for the honey harvest, without contracting the swarming-fever, means success to their keeper, while few bees at that time means a failure, no matter how many there may be at all other times.

The early management of any hive consists in knowing that the bees have a good queen, plenty of stores, and that they are tuckt up warm and secure at the top of the hive. Bees will build up even if the top of the hive has cracks in it; but all will see that the heat which passes out of these cracks takes so much warmth away from around the cluster, and causes the bees to burn just so much more fuel (honey) to replace the same, only to be carried away again. Therefore, it pays well to see that the top of the hive is tight in early spring.

Plenty of stores are needed, for if the bees have to scrimp on account of fear of starvation, not nearly so many bees will be reared as there would be were there so much honey in the hives that the bees could use it lavishly. A hive that has 20 pounds of honey in it on the first day of April will, as a rule, give double the bees at the commencement of the clover harvest, that the one will that has only five pounds, providing the latter does not starve altogether. A good queen is an actual necessity; for, tuck up the hive as well as we may, and give the bees a surplus of stores, to such an extent that they feel rich, yet if the queen is poor or failing there will be only enough bees reared to keep up the dying population of the hive, resulting in little or no honey to the owner.

Seeing that the bees have the three requisites named above, little more will be needed from the farmer till swarming-time arrives. When the first swarm issues he will mark the date on the hive, so that in eight days he can go in the evening and listen for the piping of the first young queen, which usually emerges from her cell sometime during the seventh day, where the swarm issues on the sealing of the first queen-cell, as it generally does. If he hears the queen piping, he may know that, if the weather is pleasant, a second swarm will issue the next day, unless thwarted in some way, and also that there is a queen hatcht and at liberty in the hive. If he hears this piping the hive should be opened quite early the next morning and every queen-cell cut off, which will surely prevent any after-swarm issuing from that hive.

To be sure no queen-cells are mist, it is well to shake the bees off each frame, in front of the hive so that none are hidden by the bees being so thickly clustered upon them.

The surplus arrangement should be put on each hive as soon as its combs are filled with brood and there is honey coming in from the fields, no matter whether they have swarmed or not, and upon all others as soon as there are bees enough in them so they can keep up the necessary warmth for brood-rearing, with the surplus arrangement on.

As soon as the sections are filled they are taken off, and more put in their places to the end of the harvest, when no new ones should be put on to become travel-stained and stuck up with propolis, and also so that the bees will be more likely to finish what are already on.

Any farmer can do as much as is here outlined, and I have sometimes seriously questioned whether this will not give any of us as good results as the more frequent manipulation of each hive, which I and others have insisted on in the past, where natural swarming is to be the order and method of increase.

Onondaga Co., N. Y.

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Should Hive Bottom-Boards be Nailed?

BY C. P. DADANT.

The above subject is suggested to me by reading the article by Wm. M. Whitney, on page 594, who urges that there are serious objections to the use of loose bottom-boards, and thinks they should be nailed to the hive. We have tried both the fast and the loose bottom-boards in the same apiaries for years, and I will now give my reason for the preference I entertain in a very decided way for the free, removable bottom-board.

Take the hive at the beginning of spring, when the bees are just going out of winter quarters. There are often thousands of dead bees on the bottom-board, and they are sometimes so packt into a solid, rotten, moldy mass that it is very difficult for the bees to remove them. With a movable bottom-board all that is required is to pry the hive from it with a chisel, breaking the propolis fastening that binds the two together, and with a small, straight block of wood in ten seconds you can scrape all dead bees, debris, and dirt from the bottom that it would have taken weeks for the bees to carry away. It is true you can remove this dirt with a tight bottom as well, by transferring the bees and combs into another hive, but the latter method is too slow for me.

In the spring, if by some accident or through some manipulation, it happens that some comb has been broken, either by transferring or straightening, and some honey has been made to run down to the bottom-board at a time when robbers are wide-awake, if you use a loose bottom you can, in one or two minutes, bring out a fresh bottom-board and transfer the hive from one on to the other. You thus avoid having to run some risk of your colony being robbed owing to the leaking honey.

Again, of all the parts of the hive the bottom-board is the first to get out of shape, to rot, to warp, to become worthless. With a loose bottom-board it takes but a minute to renovate the foundation of the abode of your bees, doing away in a twinkle with a defective piece which may have been damaged by unexpected causes, such as the gnawing of mice, or by a loose knot.

Then in hot weather it is surely a very satisfactory thing to be able to increase the ventilating space at will. Mr. Whitney favors re-spacing the combs by removing one or two from the brood-chamber for ventilation. I will agree that this looks very nice at first sight, but I doubt whether Mr. Whitney has done this more than one season, for when he finds that the bees have thickened the combs so as to leave only the usual bee-space, and that they have perhaps built an additional comb between the others, and that he has a lot of cutting down to do before he can again place 10 frames in his hive, he will not be likely to want to try this experiment again. We have occasionally had to handle hives of bees in which an inexperienced person had placed 8 frames only where 10 really belonged, and we have always found that the bees managed to fill all the space according to their natural habits. I had almost as lief handle a hive in which there were too many frames as one that contained too few. This reminds me of a bee-keeper who filled his hives entirely full with frames ⅞ inches thick, putting 13 of them in an 8-frame hive. It was a nice job to remove them, and I would rather have box-hives than hives arranged in this way.

Ever since we have begun using loose bottom-boards and raising the hives in front in hot weather, we have avoided the breaking down of combs by heat. I must say, however, that the straw mat inside of the cap over the combs or the supers is a very good adjunct as a preventive of the action of the sun's rays.

We can see no advantages whatever in the tight bottom. If one wants to transport hives they can easily be fastened by a cleat on the side which will fasten the cap or the cover at the same time as the bottom; or if for transporting them about the apiary, one can resort to the Van Deuzen clamp, which makes a tight or a loose bottom at will.

The only purpose for which we have seen any use for bottoms nailed fast to the hive is in shipping or transporting. We have transported thousands of hives from one apiary to another, and have sometimes nailed the bottoms to the hive for that purpose, but we have never hesitated in taking the nails out afterwards, and we usually leave them to project a little for that purpose when they are driven.

If there are advantages to the tight bottom which counterbalance the disadvantages, I for one have surely not found them.

Hancock Co., Ill.

⁂

Do Italian Bees Produce Better Honey?

BY A. W. HART.

Mr. Bevins, on page 518, says he is sorry I took his "squib" so seriously. Well, I am not feeling very badly over the matter, but how would he have me take it? I should have made no reply had there not been criticism and ridicule, and an effort to disparage and impugn my motive in asking the question.

The first sentence, in my first communication, reads: "We sometimes see the statement made," etc., and I have shown that prominent bee-men do entertain and promulgate the doctrine that Italian bees produce better honey than others, etc. I askt the question as to how it is, when all have access to the same sources of supply, and this, as Shakespeare says, is the whole "head and front of my offending;" and for this I am called in question, my motive ridiculed, and I made to appear as "putting up a job on the bee-keepers."

Mr. Bevins says: "I would like, as well as Mr. Hart, to know why Italian bees store a better honey than others," etc. That is what I wanted to know, and why I askt the question of those supposed to know, and why did not he, or was he afraid some other sharp critic would arise and accuse him of "putting up a job on the bee-keepers?"

He says what he said was not an answer to my question, was not intended to be. Then why was it written? Surely, my question was fair, and sought a fair answer, and not the ridicule he gave it in trying to make me pose as fooling with the bee-keepers. I have proven my position, given my authority for the "opinions and statements," and yet Mr. Bevins must fire a parting shot, saying, "'Tis still my belief...... that Mr. Hart has started the bee-keepers in pursuit of an ignus fatuus." I may be afflicted with a little mental obtuseness, unable to comprehend the logic of things, but I fail to fathom the motive of such flings, unless it be for "distinction," or, may be, a challenge to cross swords. If it be the former, he is welcome to all there is on both sides; if the latter, I shall not dodge, tho it would doubtless be uninteresting and unprofitable to the readers, and of necessity lead beyond the limits of apiarian literature, and consequently inadmissible to the columns of the American Bee Journal. Nevertheless, the legend "At Home" may be found on the "lintel."

Mr. B. says: "Mr. Hart mistakes." Now, I might use the boy's argument, and say, "You're another." He says he did "not say, or intimate, that his [my] question was entitled to no consideration." Mr. Hart did not say he did. Mr. B. mistakes. How does he read? Let me quote from Mr. Hart, page 457: "Mr. B. says I came at them with another 'if,' which is entitled to no more consideration than the other." Is it not clear that it is the two hypotheses to which he alludes—the aforesaid "Ifs"—of which I said he intimated they were entitled to no consideration, and not of the "question."

Mr. B. is right when he thinks I thought so, too, nor did I use them as my reasons, for did I not say "if as some say," showing they were quotations? Then, why attack me on that line? I have shown that men do have the opinions, and state them, that Italians produce better honey. May be they are right. I did not see it, and askt for light. I think a man ought to always be "able to give a reason for the faith that is in him." I askt a question touching that faith, and for this question Mr. B. tells you his belief still is, that Mr. Hart has started the bee-keepers on a "jack-o'lantern" chase, then meekly and cheekily says, "Let us have peace." It seems to to me there was peace till he made war. Who "puts up a job?" The one who states or affirms or erects a structure, or the one who merely interrogates, Why doest thou thus?

Mr. B. may have thought that after the explosion of the 14-inch shell from his big gun I would be demolisht, and placed hors du combat, hence the "Let us have peace." Yes, by all means, let there be peace, and when the terms are arranged on the basis of fairness, right and justice, I am ready at any time to sign the "protocol;" *but* I shall "yield no territory," and Mr. B. must pay his own "*transportation.*"

Stephenson Co., Ill.

BIOGRAPHICAL

MR. CHAS. N. WHITE.

This week we have the pleasure of introducing to our readers, by pictures of himself and apiary, Mr. Chas. N. White, of England, whose series of nine articles on bee-keeping appeared in this journal during July, August and September. The picture of his apiary we use by the courtesy of Gleanings, that paper having copied it from the British Bee Journal, from which we take the following paragraphs concerning it and its scholarly owner:

Our bee-garden picture shows the apiary of Mr. C. N. White, and is situated in the village of Somersham, Hunts., in which place he has resided for the past 18 years. In response to our request for a few particulars regarding himself and his work to go along with the picture, Mr. White says:

"My first lessons in bee-keeping were taken from my old friend and schoolmaster, Mr. Winter, of Caistor, Lincs., with whom I lived while apprenticed as pupil teacher. Here, 28 years ago, I first saw bees kept on a humane principle, for my *bee-master* (tho hardly progressive or scientific enough to fairly give him a claim to that distinctive title) preferred an economical as well as humane system of bee-keeeping. From 1875, when I left college, to 1879, when I settled at Somersham, I was gleaning information on bees, and learned much from Mr. W. B. Jevons, of Market Rasen, who was then an expert bee-keeper. Here, then, I formed the nucleus of an apiary that eventually became my pride, and did not lack the admiration of friends. The work and worry inseparable from scholastic duties in a rural school of 250 children at first prevented me from doing very much with the bees; but since I have been able to turn to the hobby in grim earnest, I have by practical work, and by the use of my pen, endeavored to show other rurals that bee-keeping is a source of interest and profit, and tends to promote good health and the power to work hard. For myself and the benefits it has conferred in this line, the multiplicity of duties I have performed and still attend to, fairly well shows."

Few will dispute Mr. White's claim to be called a worker when we learn that he is Hon. Sec. Hunts. and Cambs. Teachers' Association, and in this capacity has been representative at annual conferences of teachers in London and elsewhere. He is Hon. Sec. Hunts. B. K. A., and of the Cambs. and Isle of Ely B. K. A., while locally he is secretary to trustees of local charity, Hon. Sec. Technical Education Committee, collector of taxes, church choirmaster, conductor of concerts, is correspondent of five local weekly papers, and writes bee-articles for ever so many other papers besides.

Bee-keepers also know that Mr. White has done a very great amount of bee-tent lecturing during his annual holiday from school duties; and when he coolly tells us that "the above are my means of recreation from school work," it almost makes one wonder when or during what hours he lies down to rest. Solid testimony to the value of the disinterested services he has for many years past rendered to his neighbors is found in the public recognition of his labors on several occasions, when testimonials have been presented to him by the leading residents of his neighborhood.

In concluding this brief notice we may mention one event, viz.: the public presentation to Mr. White of a gold watch and illuminated address in 1895, on his 40th birthday, to mark his 16 years' services to the locality. On this occasion, when returning thanks for the honor done him, he alluded to the fact that in all his work much of the success he had been able to achieve was due to his good wife, and the possession of a happy home—sentiments in which we are sure our readers will cordially agree.

Mr. White holds the first-class certificate of the British Bee-Keepers' Association, and frequently officiates as judge at bee and honey shows. Indeed, he may be very fairly clast as one of the public men of the bee-keeping craft.

We learn further that Mr. White has been a school teacher for twenty-two years, but last December he made a change in his vocation for one where tho there is less responsibility there is less work and worry. In taking the mastership with his wife as matron of the Union House, at St. Neots, he has leisure to spend with the bees. He has given up lecturing, as he could not leave the house in the evening frequently, but he can very conveniently attend the council meetings of the British Bee-Keepers' Association in London, and judge for that organization when required.

Mr. White informs us that he "has a good wife and three bonny boys, two of them standing six feet high."

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Transferring Now or in Spring.

I sent for a sample copy of the American Bee Journal and got it, lookt it over, and of course subscribed for the balance of the year. I read Mr. White's third chapter, got the bee-fever, and bought a colony of bees; read more, and got more fever, and more bees. I have four colonies now, and am looking for more. I have two swarms in boxes 11x20½ inches inside, the frames running across the box, are all full. I want to put them into a standard hive. Should I better shift them now, or put a super on and wait until spring? They are getting plenty of honey and pollen, so I will have to do something to give them more room. FLORIDA.

ANSWER.—Probably the safe thing will be to leave them where they are now till winter is over, giving them additional room if needed.

Apiary of C. N. White—From British Bee Journal.

A "Red Clover" Queen, Etc.

1. In April, 1897, I had one colony of bees that was queenless, and I sent for one of those red clover Italian queens, introduced her, and the colony built up strong, but they gave only six or eight pounds of honey, and the combs had more than twice the wax in them that were in those built in other colonies. The bees wintered well and built up very strong last spring, but they would not store any honey, and would hang out, do all that I could. When they had a case of sections on top and a brood-chamber with foundation in the middle (I use the Heddon hive), they would hang out. While those along side gave me from 60 to 75 pounds of surplus honey, they gave me none this year, and appeared to be the strongest. The queen seemed to be very prolific, but the bees would do nothing but sting, for they were little terrors to handle. What was the trouble?

2. Will queens mating with drones from a colony like the above be likely to be much better honey-gatherers than this colony? PENNSYLVANIA.

ANSWERS.—1. If the bees had the same chance in every way as the neighboring colonies, it is to be feared that the trouble was in the character of the bees themselves.

2. They might be a good deal better. The workers partake of the characteristics of both father and mother, and sometimes there is a decided advantage in the introduction of new blood, even if that blood be no better than the old.

Honey as Food is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey among should-be consumers. The forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 30 cents; 50 for 50 cents; 100 for 90 cents; 250 for $2.00; 500 for $3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all other bee-keepers possible to subscribe for it.

☞ See "Bee-Keeper's Guide" offer on page 653.

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Ten Weeks for Ten Cents.—On page 651 we renew our offer made to *new* subscribers in the last number of the Bee Journal for September. Now it seems to us that nearly all of our regular readers have neighbor bee-keepers whom they could secure on that liberal offer. With last week's issue we began printing an extra-large edition weekly so that we might be able to accommodate all the new ten-weeks-for-ten-cents subscriptions that might be sent in. We hope all who can do so will help in this fall campaign for new subscribers. The Bee Journal should have at least double its present list of regular subscribers.

◆

Honey at the Paris Exposition.—A local California newspaper reports that recently the Secretary of the Chamber of Commerce at Los Angeles, wrote to the California Bee-Keepers' Exchange in regard to an exhibit of honey at the Paris Exposition, in 1900. In reply to this, C. H. Clayton, secretary and manager of the Exchange, wrote as follows:

"Your favor of Sept. 19, relative to a prospective exhibit at the Paris Exposition is at hand. There can be no question but that it would be to our advantage to have an exhibit there, and the matter has already been discust in an informal way among our members. The whole subject will come up for final action at our annual meeting, which occurs early in January, 1899. One great disadvantage under which we labor is the apparently growing uncertainty of crops, this year being a complete failure, and about every other year for the last ten years being a partial failure, making it difficult, if not impossible, to hold trade secured. During 1897 we secured quite a foreign trade, sending honey to all the principal European points, including South Africa; but this year we have absolutely no honey to fill orders from there, and we have now on file orders in our office for more than 600 tons for export, with not a ton in sight to fill them.

"Central California will produce a little honey, but as a rule it is not acceptable to any of the foreign markets except Germany, almost all the markets demanding Southern California honey. Even central and northern California will not produce much more than 120 tons—one-fifth of the amount for which we already have orders—and the local demand will take most of that. So you see the question with us is whether we should be exhibiting, or hold out inducements to trade which we may not be able to fill.

"Whatever action is taken in the matter we will promptly notify you."

From the foregoing it appears that the California Bee-Keepers' Exchange has been doing some great work. Having on hand orders to the amount of 600 tons of honey is no small thing. We trust that the Exchange may soon be able to fill all its present orders, and many more yet to come.

◆

The Price of Honey has an upward tendency, so those who are favored with a crop will at least have some benefit from the scarcity. The advice to hold for a fair price was never more seasonable. Gleanings reports that it is not an easy thing to find sufficient choice honey to supply the demand they have for it.

◆

The Season in California.—W. A. Pryal says in Gleanings that the season was in general so bad throughout California that it was a question with some whether it was better to feed the bees or let them starve. The northern coast and mountain counties gave a medium crop. But there has been no rise in price to correspond with the scarcity of the crop. Honey is granulating earlier than usual, owing perhaps to the large amount of alfilaree nectar gathered in that region.

◆

The "Bare" and The Bees.—The New York Sun received a number of original compositions on animals, from a Boston school-teacher, which show several different characteristics from what we have been led to suppose belonged to the literary productions of even the childish Bostonese. Here are two samples:

THE BARE.—Bares are of many sighes and all big. The chief kinds are the grizzly bare which is black; the sinnermon bare which is good and gentle; the white bare which bleaches its skin to hide in the snow and make a rug, and the black bare which is common and is careful of its cubs. Bares fight bees for honey, which is mean because the bees are little. Once a bare found some currant-jelly sitting on a garden-bench to dry, and he ate it, and the lady hadn't any more, which was greedy. Bares are pigs. J. C. C.

BEES.—Bees are always busy because the idle ones are killed. They make honey and wax, but parafeen candles are cheaper or else candles made out of whales. The bees build cells and combs and some times fill trees and bears smell the honey and eat it. They suck the juice out of flowers and the flower dies. Bees are meaner than mosquitoes, and you can tell them by the yellow bands on their abdomen. A. C.

◆

The Old Union Victorious Again.—General Manager Thomas G. Newman, of the National Bee-Keepers' Union, has sent us the following concerning a case at law in which all bee-keepers will be interested:

The enemies of the pursuit of bee-keeping have again been defeated. It will be remembered that about one year ago Mr. Frank S. Buchheim, of Santa Ana, Calif., was arrested under Sec. 370 of the Penal Code of California, for keeping 100 colonies of bees on his premises, charging him with maintaining a nuisance in the neighborhood, averring that the bees ate and destroyed the fruit belonging to the neighbors, and interfered with laborers who were engaged in caring for the fruit, etc. His apiary and premises cover 7½ acres. He built a fence 6 feet high to enclose 24x32 feet, in which he kept the hives of bees during the fruit-drying season, thus controlling the bees and preventing annoyance to the neighbors. But they were not satisfied with these precautions, and demanded that the bees be moved out of the locality.

Suit was brought against Mr. Buchheim for maintaining a public nuisance, and he was fined $50 and costs. As he was a poor man with a large family to support, he did not pay the fine, and was committed to jail for 25 days.

After 10 days had elapst an appeal was taken to the Supreme court, and he was releast pending appeal.

In the Superior court Judge Ballard ruled on the appeal that the complaint was insufficient to constitute a public offense, and entered a judgment discharging the defendant and exonerating his bail.

The enemies of bee-keeping not being satisfied with this, instituted another suit against Mr. Buchheim, and through the efforts of the National Bee-Keepers' Union assisting the attorneys for Mr. Buchheim, and paying a portion of the court fees necessary for the defense, they have failed to obtain a verdict against him, tho the jury wrestled all night long with the case. At first they stood 7 for acquittal and 5 for conviction, in a community led by a Justice of the Peace, and organized to persecute Mr. Buchheim because of his keeping bees successfully and profitably.

This is another victory for the National Bee-Keepers' Union, and bee-keepers all over the continent will be delighted to learn the facts in the case.

THOMAS G. NEWMAN,
General Manager National Bee-Keepers' Union.

The Old Union deserves congratulations upon this victory. It shows again that the only thing bee-keepers need to do to secure their rights, is to be united in an organization the duties of whose officers are to see that such rights are respected, or secured by putting up a good fight in the courts of the land. Often an innocent bee-keeper is financially unable to wage his battles alone, and bee-keepers owe it to themselves, to the pursuit which they represent—yes, to the fellow bee-keeper who is persecuted—to help carry on the war until victory is won for the right.

General Manager Secor's next annual report—to be issued in a little less than two months—will also show much good work done by the United States Bee-Keepers' Union the past year. The partial report that he gave at the Omaha convention was very bracing, and made each member feel that he belonged to a grand organization. But where there are hundreds of members now, there should be thousands.

◆

Apiarian Exhibit at the Illinois Fair.—Mr. F. Grabbe, the judge of the apiarian exhibit at the Illinois State Fair, which closed Oct. 1, called on us last week and kindly furnisht us with a list of the exhibitors with the premiums awarded. They are as follows:

Display of comb honey—W. Z. Hutchinson, 1st premium, $25; M. J. Becker, 2nd, $15; J. Q. Smith, 3rd, $5.

Collection of labeled cases containing 12 or more pounds of white honey from different flowers—W. Z. Hutchinson, 1st, $10; M. J. Becker, 2nd, $5.

Collection of labeled cases containing 12 or more pounds of amber or dark honey from different flowers—J. Q. Smith, 1st, $10; M. J. Becker, 2nd, $5.

Case of white clover comb honey, 12 to 24 pounds—W. Z. Hutchinson, 1st, $5; M. J. Becker, 2nd, $3.

Case of basswood comb honey, 12 to 24 pounds—W. Z. Hutchinson, 1st, $5.

Display of extracted honey—M. J. Becker, 1st, $25; W. Z. Hutchinson, 2nd, $15; Jas. A. Stone & Son, 3rd, $5.

Display of samples of extracted honey, named—M. J. Becker, 1st, $5; W. Z. Hutchinson, 2nd, $3.

Display of candied honey—Jas. A. Stone & Son, 1st, $15; M. J. Becker, 2nd, $10.

Display of beeswax—Jas. A. Stone & Son, 1st, $15; W. Z. Hutchinson, 2nd, $10.

One-frame observatory hive of dark Italian bees—W. Z. Hutchinson, 1st, $5; Chas. E. Shank, 2nd, $3.

One-frame observatory hive of Golden Italian bees—Chas. E. Shank, 1st, $5; W. Z. Hutchinson, 2nd, $3.

One-frame observatory hive of Carniolan bees—M. J. Becker, 1st, $5; W. Z. Hutchinson, 2nd, $3.

One-frame observatory hive of albino bees—W. Z. Hutchinson, 1st, $5.

One-frame observatory hive of Cyprian bees—W. Z. Hutchinson, 1st, $5.

One-frame observatory hive of Holy Land bees—W. Z. Hutchinson, 1st, $5.

One-frame observatory hive of black bees—M. J. Becker, 1st, $5.

Group of queen-bees comprising 2 dark Italian, 2 Golden Italian, 1 each Carniolan, albino, Cyprian, Holy Land and black—W. Z. Hutchinson, 1st, $10.

Display of honey-plants, prest, mounted and labeled—W. Z. Hutchinson, 1st, $5; M. J. Becker, 2nd, $3.

"Judge" Grabbe made several excellent suggestions looking toward a revision of the present Illinois premium list. He would make the full score quantity of honey, both comb and extracted, 300 pounds instead of 500 pounds. He would also omit all the awards on one-frame observatory-hive exhibits of albino, Cyprian, Holy Land and black bees; and would substitute some other things, among them honey-vinegar, with recipe for making the same.

Mr. Grabbe's reasons for omitting the premiums on the bees mentioned, are that the albino is a freak, there are no genuine Cyprian and Holy Land bees in this country, and the breeding of blacks should be discouraged rather than encouraged by offering premiums on them at fairs.

Doubtless by next year's fair the list will be revised along the lines suggested by Mr. Grabbe. By that time we hope that a good honey season will be enjoyed, and that there will be more exhibitors in the apiarian section of the Illinois fair.

◆

Horseradish Leaves crusht are among the latest remedies for bee-stings. So says a "stray straw" in Gleanings.

THE WEEKLY BUDGET

MR. HARRY S. HOWE now has under contemplation a special course in entomology at Cornell.—American Bee-Keeper.

THE LANGSTROTH FUND has received lately 50 cents each from Messrs. W. G. Secor and A. I. Emmons, of Greene Co., Ill. There is plenty of room for more.

MR. W. A. PRYAL of Alameda Co., Calif., writing us Sept. 22, said his bees were storing honey right along, so that he had no fears of their not having plenty of stores to carry them through the winter.

MR. OSCAR KERNS, of Caldwell Co., Mo., was in to see us Oct. 4. He deals in bee-supplies to some extent, besides keeping a few bees. The honey crop was practically nothing this year in his locality.

MR. W. M. BARNUM, once an occasional contributor to the American Bee Journal, has lately become the editor and publisher of "Barnum's Midland Farmer," publisht in Missouri. We wish him success in his venture.

MR. F. GRABBE, of Lake Co., Ill., who was judge of the apiarian exhibits at the Illinois State Fair this year, dropt in to see us last week. There were four exhibitors of honey, bees, etc., at the Fair this year, as will be noticed by the list of premiums mentioned on this page.

MR. C. B. HOWARD, the secretary of the Seneca County Bee-Keepers' Association, is pictured in the October American Bee-Keeper, and also one of his four apiaries. In a short biographical sketch, Editor Hill pays a deserved tribute to Mr. Howard's abilities and success as a bee-keeper.

MR. W. T. RICHARDSON, of Ventura Co., is called the "leading honey-producer in Southern California," and both himself and one of his numerous apiaries are shown in Gleanings for Oct. 1. Mr. R. has about 1,200 colonies in four apiaries, located in the Simi Valley. His bees have something like 15,000 acres to roam over, to 12,000 of which he has the exclusive right. In the next issue of Gleanings will be given some "idea of the magnitude of Mr. Richardson's honey-yields." His chief honey source is purple sage. We presume his yields have been simply immense, for when they have a good honey-season in that part of the country, it seems to just pour in. "Rambler" Martin has been visiting Mr. R., hence the pictures and write-up.

MR. F. A. CROWELL, a queen-breeder in Fillmore Co., Minn., has just recently taken unto himself a life-long "queen." Our hearty congratulations are hereby extended to the happy couple. Altho Mr. C. has doubtless always been able heretofore to "Cro-well," he will now "Cro"-better—having such "queenly" help. (We beg our New Jersey friend's pardon. We just couldn't help it that time—it punned itself.)

A NEW JERSEY SUBSCRIBER wrote us as follows last week:

"Your new system of spelling is a good thing; push it along. If you would strangle at their birth some of those horrible puns you let loose once in awhile, there would soon be a *New* York in Illinois."

We are very sorry that our so-called puns have offended any one. They are the last things that we would suppose could be objected to. "Those horrible puns!" Well, we'll have to fix them—"strangle at their birth," or else not get them started at all.

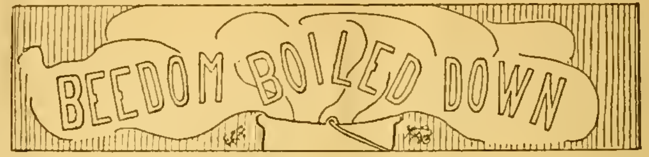
MR. FRANK MCNAY, of Wisconsin, was in Chicago last week, and of course called to see us. He had 700 colonies this year, in several apiaries, and they averaged about 70 pounds to the colony, of extracted honey, thus making about two carloads. It is all sold. Mr. Pickard, of the same State, who had some 50,000 pounds of extracted honey this year, has also sold his crop. Judging from the way these large amounts have been taken, there is a fear on the part of some buyers that the short crop this year would cause a greater rise in the price later on, and they would better buy promptly. In this we think they are wise.

MR. HERMAN F. MOORE, who recently wrote a series of seven articles on "The A B C of Marketing Honey" for our columns, is thus referred to editorially in the American Bee-Keeper for October:

"To the apicultural firmament an exceedingly bright star has recently ascended. This is the impression we have received from a series of excellent articles in the American Bee Journal, on the subject of building up and maintaining a market for honey, contributed by Herman F. Moore, Esq. His style is pointed, and rings with a vim and business enterprise, backt by bee-keeping knowledge, that will not be without lasting effect along the line of his travels in the interest of his honey-trade. More Moores! is the crying need of American bee-keeping interests."

HON. G. W. SWINK, of Otero Co., Colo., is not only a bee-keeper but a successful melon-grower. He generously treated the whole convention at Omaha, in the Apiary Building on the Exposition grounds. Mr. A. I. Root, in Gleanings for Oct. 1, had this to say about Mr. Swink and his famous cantaloupes:

"I had been eating a good deal of trash about that time, and I concluded I would not dare to even taste of the melons; but when I saw the rest having such a 'picnic,' I concluded I would just 'sample' them, sick or no sick; and they were so exceedingly delicious that I really could not find a stopping-place, and, to my great and agreeable surprise, I was not sick a bit. Well, we made the melon-grower 'stand up' and answer questions. We were especially interested in hearing him tell that he never succeeded in growing nice melons until he put bees enough in his melon-patch to fertilize all the blossoms. Now, may be I have made right here an awful mistake. If so, somebody will correct me; but, if I remember correctly, he said he had 400 *acres* of melons, and that it takes at least 400 colonies of bees to fertilize them properly, and that it is now pretty clearly settled that you could not grow a large crop of nice melons without having bees in the melon-patch, say a good colony to every acre of melons. I do not know why somebody did not think to get a Kodak view of the convention while the members were all having 'rest and refreshment' with those crates of melons. After we had had all we wanted, the remnants were given to the Indians, who held forth just back of the Apiary Building."



BEEDOM BOILED DOWN

Look Out for Foul Brood.—A note of warning is sounded in Gleanings against feeding honey got from other bee-keepers. The safe thing is to feed no honey unless you *know* it's all right.

Hand-Holes or Cleats.—Editor Root, having heretofore advocated hand-holes because neater and not in the way, acknowledges himself now a convert to cleats because it is so much easier to lift hives with cleats. He is now hunting for a combined cleat and hand-hole, neat and good.

To Fasten Foundation in Frames.—Put the frames on top of a stove, top-bar down, putting on as many as the stove will hold. When the frame is heated, put the foundation on it, and as soon as it melts dip it in a large vessel of cold water. It makes a solid job.—Leipziger Bienenzeitung.

The Wee Bee-Moth.—This little moth is getting to be very troublesome in the region of Alameda Co., Cal., says W. A. Pryal, in Gleanings. It doesn't work so much in the hives, but is harder to dislodge than the larger sort, and destroys combs left out of the hives, especially those containing pollen.

Thieves Spotted by Wires in Frames.—Three colonies of bees were destroyed for Benj. Passage. The deputy sheriff got some clew, sifted the ashes and found the wires that had been in brood-frames, the thieves plead guilty and got 90 days in the workhouse, the heaviest penalty a Michigan justice could inflict.—Gleanings.

Painting with Propolis.—Prof. Henry, arguing that bees are eager to propolize the entire inside of their hives, advocates doing this in advance for them. He dissolves propolis in alcohol, applies to the hive with a brush, and the alcohol immediately evaporing leaves a coat of fine yellow. He thinks the bees like the odor of such a coating on the inside of hives and feeders.—Le Progres Apicole.

Honigkuchen.—Bring one pound of extracted honey and a ¼ pound of butter to a boil. Let cool for 10 minutes. Add one pound of flour, ¼ pound of ground almonds, ⅛ teaspoonful of cloves, the grated peel of a lemon, and a scant teaspoonful of soda dissolved in a little hot water. Mix and set aside over night. Next morning roll out ⅛-inch thick, cut in small squares, press an almond in each corner and in the center, and bake in a moderate oven.—Chicago Record.

Time of Larvæ.—Challenged by G. M. Doolittle to prove that a young bee remains a larva only five days, Dr. Miller replies in Gleanings: "Among those who say five days for the larval state stands Dubini. T. W. Cowan, in the Lth edition of British Bee-Keepers' Guide-Book, page 10, gives 'Time of feeding the larvæ' as five days for queen and worker, and six for drone. Years ago 17 to 18 days was considered the time for development of queen. Nowadays it is brought down to 15."

Report of the Omaha Convention.—A competent court stenographer was engaged to take down the whole proceedings of the convention, and very fortunately this stenographer was also a bee-keeper; so it is fair to assume that there will be an accurate report of all the proceedings. These will be given in the American Bee Journal. Gleanings will give only a condenst report, as usual, and this report will be in the nature of editorial snap-shots given from time to time.—Gleanings.

To Prevent Swarming, and at the same time to get the bees started in supers, a correspondent of Revue Internationale says he closed the entrance and let them have in its place for 18 days an entrance to the super. Six colonies thus treated filled their supers, while the other colonies of the apiary preferred to swarm. Editor Bertrand thinks the plan worth trying, but cautions against danger of the queen laying in the super, as the bees like to rear brood in the best ventilated part of the hive.

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These Special Articles will Appear....
With Others, During the 10 Weeks following Oct. 1:

Bee-Keeping in Cuba and Porto Rico—
By O. O. Poppleton, of Florida.

Recent Progress in Apiculture—
By Ernest R. Root, Editor Gleanings in Bee-Culture.

Bee-Keepers and Supply Manufacturers—
By Dr. C. C. Miller.

Foul Brood in the Apiary—
By Wm. McEvoy, Foul Brood Inspector of Ont., Canada

Advanced Methods of Comb Honey Production—
By S. T. Pettit, of Canada.

Migratory Bee-Keeping—
By H. E. Hill, Editor American Bee-Keeper.

The Scientific Side of Apiculture—
By C. P. Dadant.

Experiences and Suggestions in Marketing Honey—
By S. A. Niver, of New York.

Best Method for Creating and Maintaining a Market for Honey—
By Herman F. Moore.

First Half Century of Bee-Keeping in America—
By Hon. Eugene Secor, General Manager United States Bee-Keepers' Union.

The Apiary on the Farm and in the Orchard—
By Hon. E. Whitcomb, Supt. Apiary Department Trans-Mississippi Exposition.

Needs of Bee-Culture in the South—
By Dr. J. P. H. Brown, of Georgia.

General Advice to Bee-Keepers—
By Rev. E. T. Abbott, of Missouri.

The Relation Existing between the Apiary and the Successful Production of Fruit—
By G. M. Whitford, of Nebraska.

The foregoing List of Special Articles represents a part of the program at the Omaha Convention. Many of the subjects will be followed by much helpful discussion. Of course, many other interesting and valuable contributions will be found in the American Bee Journal during the 10 weeks' "trial trip," besides the other regular departments. But in order to secure all the above articles, the trial subscriptions should be sent in **promptly**, as we may soon run out of back numbers from October 1.

Every Bee-Keeper in America ought to have the old American Bee Journal for 10 weeks from Oct. 1, 1898, and right along thereafter. It will be worth to any one of them **many times** its full year's subscription price. **Send 10 cents Now, anyway,** and get it for the next 10 weeks.

Invitation to Our Regular Readers: We trust that our present subscribers will send the names and dimes of their neighbor bee-keepers, or get **them** to do it. Show them this liberal trial-trip offer. They should jump at such an opportunity to get 160 large pages of the best bee-literature for only 10 cents!

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A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—One 60-pound can, 7½ cents a pound; 2 cans, 7¼ cents per pound; 4 or more cans, 7 cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. This honey is all

Absolutely Pure Bees' Honey.....
the finest of their kinds produced in this country.

We would suggest that those bee-keepers who did not produce any honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. The pamphlet, "HONEY AS FOOD," will be a great help in creating customers for honey. See prices on another page.

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If you care to know of its Fruits, Flowers Climate or Resources, send for a Sample Copy of California's Favorite Paper—
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Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. M. H. HUNT
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Address F. RAUCHFUSS, Elyria, Colo.
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GENERAL ITEMS

Wild Asters in Abundance.

We had a fine prospect for a fall flow of honey, but it has set in to raining; our road sides and all the pasture fields are one perfect flower-pot, covered with wild asters.

H. C. KUYKENDALL.

Clark Co., Ill., Oct. 4.

Had a Good Crop.

I have had a good crop this year—70 pounds to the colony, and people say this is a poor locality to keep bees in. I could not get along without the Bee Journal. It is on hand every Friday, like clockwork.

GEO. STEENBACK.

Lackawanna Co., Pa., Oct. 2.

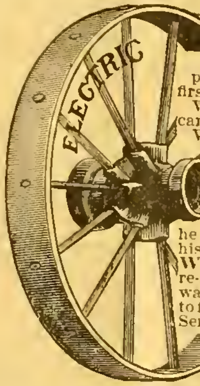
Light Crop of Honey.

Bees have brought in a very light crop of honey this year, but are in good condition for winter; the brood-nests are well filled. The bees will just about meet expenses.

Lucas Co., Ohio, Oct. 1. M. BEST.

Bees Did Fairly Well.

The honey season is over now, and the bees have done very well. We had a heavy flow from white clover and raspberries, but not a very long one. My bees averaged 25 pounds to the colony, spring count, and increase 50 percent. We have had a good



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part of a wagon wears out first? The wheels, of course. Why not buy wheels that can't wear out? When a man buys the
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flow from goldenrod and asters. We have had fine weather, altho it has been pretty dry. We have had no killing frosts yet, and the bees are well supplied with winter stores. The farmer's around here are talking of spraying their apple trees when in blossom next spring, and if they do I am afraid it will be good-bye bees.

C. H. Field.
Cumberland Co., Maine, Oct. 4.

Getting Started with Bees.

We have had our bees a little over a year. In July, 1897, a swarm of bees came to us, and we cared for them. Last May they swarmed three times. During the past summer another swarm came to us. They are doing well. My husband bought six colonies, so now we have 10.

We live in the woods, and they seem to like it here.

Mrs. Lorina F. Calkins.
Martin Co., Minn., Oct. 5.

Bees Did Reasonably Well.

We have 13 colonies of Italian bees, and they did fairly well the past season. The honey-flow was not so good here this year as it has been in former years. We do not let our bees swarm; if we want increase we divide them. We sell all our honey in the home market.

Mary J. Beights.
Beuna Vista Co., Iowa.

A Rising Honey Specialist.

I left Chicago over two years ago to seek my fortune as a specialist. I am very happy to be able to say that, so far, I do not regret my venture. From 50 colonies I have taken three tons of honey, as nearly as I can estimate it. I am working for a moderate increase. I increast from 40 to 60. If my hopes are realized, some day I shall number my colonies by the hundred. I started with 22 when I first came here, bringing them with me. I took only three barrels of extracted this season (and it is fast disappearing), the balance being comb honey. I shipt part of my comb honey to a distant city and a good portion of it was damaged in transit, and the comb was well attacht to all sides of the section, too.

Well, I have finally sold enough around here to pay for a horse and market wagon, and soon I shall start out to sell the balance of my crop. I know my extracted honey will soon be exhausted. I have been selling buckwheat extracted at 5 cents a pound, white clover at 8 cents, and basswood at 10 cents. The reason I charge more for basswood is because I got only about 70 pounds of it. It was only black bees that workt on basswood here, and as I keep mostly Italians, my crop was mostly from clover. Isn't it strange that my Italians should continue to work upon clover after basswood opens, while the black bees leave clover and go for basswood? The above prices were for quantities of three pounds and over. As soon as I get away with my horse I shall ask 10 cents for clover extracted and 6 cents for buckwheat.

I have come to be known for miles around as "Honey Brown," and many are the stories I hear about how "Honey Brown" must adulterate his honey and feed his bees, "for why should he get so much

The Bee-Keeper's Guide

This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published today. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."

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that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

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☞ Progressive Bee-Keeper, 50c per year. "Amateur Bee-Keeper," 25c. Both for 65c., postpaid. Sample copy of the Progressive free, and a beautiful Catalog for the asking.

Address, Leahy Manufacturing Company, Higginsville, Mo., or 1730 South 13th St., Omaha, Neb.

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☞ See Honey Offer on page 652.

honey while the farmers get nothing?" it is said. It is not the people I sell to who talk this way, but the people who hear of my success but do not buy any honey. I find that after I have once sold to a man I sell to him again and again, and he only laughs when he hears these adulteration yarns, for he is satisfied that my honey is honey. Why, somebody actually convinced a grocer (who bought a case of comb honey of me), that that honey never came from the inside of a bee-hive. (It was in plain sections). He lookt at me with much suspicion the next time he saw me, and askt me some sharp questions. I askt him if his informant tasted the honey, and he said no. I askt him if he himself had tasted it, and he said no. Well, I gave him a lecture on the non-existence of artificial comb honey, and when I saw him a few days later his face was all smiles—he had eaten a cake of my honey and he wanted some more like it.

I am satisfied that it is for my interest to sell my own honey direct to consumers and grocers, for every person sold to this year will be my customer next year, and he becomes a living advertisement.

Another year I expect to go a little heavier into extracted honey. I workt only a few weak colonies for it this season.

I take great pains in breeding my stock. My breeding colony this season gave me 163 sections and 130 pounds of extracted honey.

I think I could get along without the "Old Reliable," but I would rather have it, just the same. E. W. Brown.

Erie Co., N. Y., Sept. 29.

Keeping Bees from Swarming.

I am only a beginner at bee-keeping, this being my second year with the bees. But for the American Bee Journal I would not be able to get along with my bees, and I think that we cannot appreciate its efforts too highly.

I was much interested in an article by Herman F. Moore, on page 612, in which he refers to non-swarming bees, and so I will relate a little of my limited experience with mine.

I began the past season with three colonies of Italians; had only one natural swarm, which absconded while I was away from home, with a virgin queen—at least there were no eggs and very little brood, a queen-cell from which a young queen had hatcht, and as the old queen was clipt she must have died.

I workt only one colony for comb honey, giving them empty brood-combs when the queen needed room, and forming new colonies with the brood I took away. This colony produced 125 full sections of honey, 100 of which were as white as snow, from the sweet clover, with which the fields and roadsides here are covered. This colony at one time had three supers, more or less filled with honey. The queen in this colony I purchast last summer (1897).

Another colony, which did not swarm, produced 200 pounds of extracted honey; this colony at one time had four full-size brood-chambers tiered up.

I sold all of the comb honey to my neighbors, and all of my extracted that I cared to sell. I get 15 cents for comb and 10

The Biggest Offer Yet!

Last year only about one per cent—only one subscriber in 100—ordered his Review discontinued. If the Review could secure 1,000 new subscribers the present year, there is an almost absolute certainty that at least 900 of them would remain; not only next year, but for several years—as long as they are interested in bees. Once a really GOOD bee-journal visits a bee-keeper a whole year it usually becomes a permanent member of his family.

I would have no difficulty whatever in getting twice 1,000 new subscribers this year, if all of the bee-keepers in this country had read the Review the past year. I have sometimes thought that it might pay a publisher to give away his journal one year, simply for the sake of getting it into new hands. There are, of course, decided objections to such a course; but I am going to come as near to it as I dare. Here is my offer:

If you are not a subscriber to the Review, send me $1.00, and I will send you twelve back numbers, the Review the rest of this year and all of next year.

Each issue of the Review, especially if devoted to the discussion of some special topic, is really a pamphlet containing the best thoughts and experience of the best men upon the topic under discussion. Twelve back numbers of the Review are, to a certain extent, so many little books devoted to as many different phases of bee keeping. Some issues of the Review are now out of print; of others only a few are left; while of others there are several hundred. Of course, I shall send those of which I have the most, but no two alike.

Most people subscribe for a journal at the beginning of the year. In this case there is no use of waiting, as you will get the Review for next year just the same as tho you waited until next January to subscribe, and you get all the rest of the numbers for this year FREE. The sooner you subscribe, the more free issues will you receive.

Let me tell it over once more. For $1.00 you get twelve back numbers, the Review the rest of this year, and for all of 1899.

31Dtf **W. Z. HUTCHINSON, Flint, Mich.**

Cash Paid for Beeswax....

This is a good time to send in your Beeswax. We are paying **25 cents a pound — CASH** — upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

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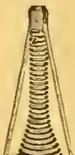

Queen-Clipping Device Free

The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

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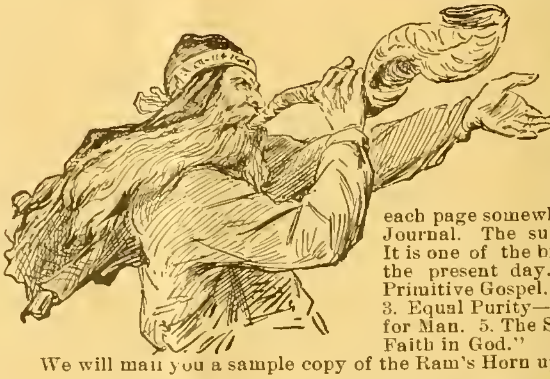

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We will mail you a sample copy of the Ram's Horn upon receipt of a two-cent stamp.

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Or, send us $2.00 and we will mail to you the Ram's Horn and the American Bee Journal, both for one year.

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118 Michigan Street, CHICAGO, ILL.

cents for extracted, and they come to the house for it.

I think that bees can be kept from swarming by giving them enough room and keeping the brood-chamber from getting crowded, and I think I shall take a great deal of interest in trying to keep my queens from coming out next season, and if I am successful next year I can find out by my young queens whether it is possible to breed out the swarming instinct.

Cook Co., Ill., Oct. 3. CHAS. W. FORD.

He That Overcometh.

BY WM. E. SHEFFIELD.

Every pathway hath some brambles,
  Every rose hides some sharp thorn,
Every sunbeam creates shadows,
  Every heart sometimes is torn.
Every joy will have an ending,
  Every soul have some regret,
There would never be tomorrow
  If to-day had no sunset.

You will find the grandest rivers
  Never flow straight to the sea.
Many mountains rise before them,
  Yet they sing on merrily.
Mountains cannot stop the rivers;
  They but turn and onward go,
Winding through the verdant lowlands,
  In a ceaseless overflow.

Heed the lesson Nature teaches—
  Pain and pleasure brothers are.
He that hath abiding courage
  Finds the gates of joy ajar.
Only in the world celestial
  Can we hope for perfect bliss.
And he only will attain it
  Who acts manfully in this.

—The Busy Bee.

Convention Notices.

Connecticut.—The fall meeting of the Connecticut Bee-Keepers' Association will be held at the Capitol at Hartford, Wednesday, Nov. 2, 1898, commencing at 10:30 a. m. Every member should make an extra effort to be present at this meeting.

Waterbury, Conn. MRS. W. E. RILEY, Sec.

Minnesota.—There will be held the annual meeting of the Southern Minnesota Bee-Keepers' Association at Winona, in the Court House, in the County Commissioner's Room, Thursday and Friday, Oct 20 and 21, 1898.

Winona, Minn. CHAS. A. GILE, Sec.

Illinois.—The Illinois State Bee-Keepers' Association will hold its 8th annual meeting at the State House in Springfield, Nov. 16 and 17, 1898. We will have the advantage of one fare and a third for the round trip—open rate—along with the Odd Fellows, whose meeting is the third Tuesday of November. Our Association has been petitioned by the Northern Illinois Bee-Keepers' Association to take the proper steps to secure the same foul brood law for our State as that of Wisconsin. Other matters of importance will come before the meeting, and we expect to have the usual good time that bee-keepers always have when they get together. Excellent board is secured at 25 cents per meal and lodgings just as reasonable. All bee-keepers are invited. The one dollar for membership fee also entitles you to the American Bee Journal for one year.

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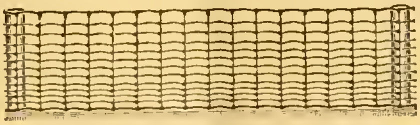

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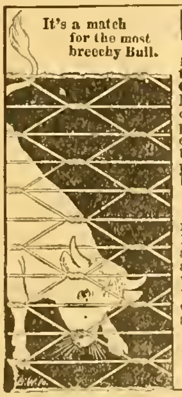
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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Oct. 7.—Fancy white clover brings 13c, with best grades of white comb about 12c; off grades with more or less empty cells, 10 to 11c; ambers, 8 to 9c, according to grade, with fancy at 10c. Extracted, white, 6 to 7c; ambers, 5 to 6c; dark, 4½ to 5c. Beeswax, 26 to 27c. R. A. BURNETT & CO.

San Francisco, Sept. 28.—White comb, 9 to 9½c; amber, 7 to 8½c. Extracted, white, 6½@6¾c.; light amber, 5½ to 6c. Beeswax, 24@27c

There were large shipments this week of extracted honey by sea, one ship taking 787 cases for New York and another carrying 535 cases for London. The entire crop this season of both extracted and comb will likely not exceed 12 000 cases. Market is firm at the quotations, more especially so for choice extracted, which is relatively lighter supply than comb.

St. Louis, Sept. 9.—Fancy white comb, 12 to 12½c.; A No. 1 white, 10 to 11c; No. 1 white, 9 to 10c.; dark and partially-filled from 5 to 8c, as to quality. Extracted in cases, No. 1 white, 6 to 6½c; No. 2, 5½c; amber, 5c; in barrels, No. 1 white, 5½c; amber, 4½ to 5c; dark, 4 to 4½c. Choice Beeswax, prime, 24c; choice, 24½c. At present there is a good demand for honey. WESTCOTT COM. CO.

Kansas City, Sept. 9.—Fancy white comb, 12@13c; No. 1, 11@12c; amber, 10@11c. Extracted, white, 5½@6c; amber, 5@5½c; dark, 4½@5c. Beeswax, 22@25c.

The receipts of comb honey are larger. C. C. CLEMONS & CO.

Boston, Sept. 30.—Our honey market shows a decided firmer tone since our last. A few sales have been made at 15c for an extra fancy lot, while almost all sales ranging from A No. 1 to fancy now are made at 14c, while occasionally, something a little off, will bring as low as 12½ to 13c. We do not look to see any lower prices.

Extracted, Florida, in barrels, mostly 6c to 7c, with a good demand. Beeswax, slow sale at 26c for best. BLAKE, SCOTT & LEE.

Indianapolis, Oct. 3.—Fancy white comb honey, 12 to 12½c; No 1, 10 to 11c. Demand fairly good. Tar-colored comb honey, 8 to 9c, with almost no demand. Clover and basswood extracted honey, 6½to7c Beeswax, 25 to 27c. WALTER S. POUDER.

Milwaukee, Sept. 20.—Fancy comb, 12 to 12½c; A No. 1, 11 to 12c; No. 1, 10 to 11c; dark and amber, 8 to 10c Extracted, in barrels and kegs, white, 5½ to 6c; dark, 5 to 5½c. Beeswax, 25 to 26c.

The condition of this market for honey is favorable for shippers of good quality either in comb or extracted, and the receipts, while they are with us very fair, are not as liberal as may be, while the demand is very fair at our quotations. We advise liberal shipments of 1-pound sections and extracted. A. V. BISHOP & CO.

Buffalo, Sept. 16.—There is quite an improved demand for honey at present, and moderate amounts can be sold of strictly fancy 1 pound comb at 11 to 12c; lower grades range from 10c downward. We advise but moderate shipments for awhile yet. Extracted—average grades could be sold at 4 to 5c. Fancy beeswax, 27 to 28c; common, 20 to 25c. BATTERSON & CO.

Columbus, Ohio, Oct. 8.—Fancy white comb, 14 to 15c; No. 1 white, 12 to 13c; No. 2 white, 10 to 11c; amber, 9 to 11c. Extracted, 5½ to 7c

COLUMBUS COM. AND STORAGE CO.

New York, Sept. 26.—Comb honey continues to arrive freely. Demand is good for nearly all grades at following prices; Fancy white, 14c; No. 1, 12c; amber, 10c; buckwheat, 8 to 9c; an exceptional quality at 9½c. There is a good demand for extracted, all kinds, at 6½c for white, and 5½c for light amber in cans; Southern, in barrels, 55 to 58c a gallon. Beeswax dull at 26c.

HILDRETH BROS. & SEGELKEN.

Cleveland, Sept. 1.—Fancy white, 13@14c; No. 1, white, 12@12½c; light amber, 11c; buckwheat, 9c. Extracted, white, 7c.; light amber, 6c.

The demand for honey is exceptionally good, owing to the crop in this vicinity being very light. A. B. WILLIAMS & CO.

Detroit, Sept. 24.—Fancy white, 11@12c; A No. 1, 10@11c; No. 1, 10c; fancy dark or amber, 9@10c; other grades, 8@9c. Extracted, white, 6@6¼c; dark or amber, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

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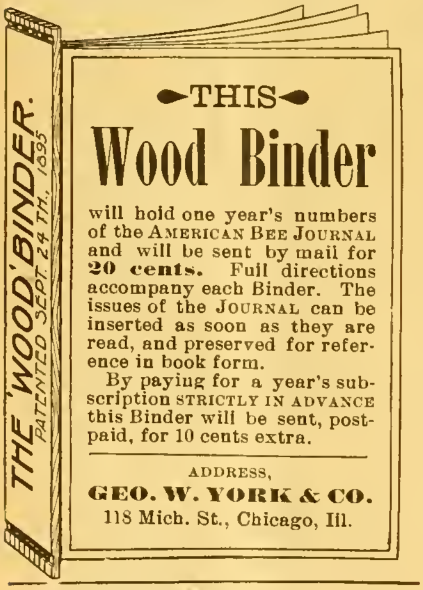

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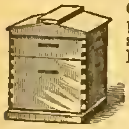

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38th Year. CHICAGO, ILL., OCTOBER 20, 1898. No. 42.

CONTRIBUTED ARTICLES

"Golden" Method of Comb Honey Production.

BY J. S. HARTZELL.

As the season for the production of honey in these parts has closed, and the product stored in supers removed and assorted and cleaned ready for shipment, I wish to apprise our "Doubting Thomas" (Mr. S. A. Deacon), and any others, of the results obtained from my apiary of 61 colonies, 40 of which, as stated in the former article, were workt on the Golden plan, and the remainder, 21 colonies, on the general, or, as I termed it, "orthodox" plan, for the season now closed.

First, then, for results in completed sections of honey which stand as follows: The 40 colonies on the Golden plan yielded 1,866 completed sections. The 21 colonies on the general plan, 489 completed sections. Average per colony on the Golden plan, of 46 13/20 sections; on general plan, 23 2/7 sections. Now, I hope this is plain enough for Mr. Deacon, or any one who may be interested enough to read this article, to understand.

It may be well enough, also, to state that of the 40 colonies on the Golden plan 10 re-cast swarms, six of which were from superseding queens, the remainder (four), with the exception of one dissatisfied with results, and as soon as the queen was liberated and began to deposit eggs, renewed their efforts and prepared in the regular order for swarming. The one exception was a colony in a 10-frame hive, and the second day after liberating the queen swarmed twice (forenoon and afternoon) with not a sign of queen-cell as I made a thorough examination while the swarm was out each time, and after returning the second time began work and have behaved nicely since.

Will some of our experts—Dr. C. C. Miller, Doolittle, or any other little or big man—explain the cause, or will all plead as Dr. Miller often does—"don't know?" My own idea in regard to this colony is, it was simply "pure cussedness." I was entirely too busy at the time to make as thorough inves-

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Interior View of the Apiary Building at the Trans-Mississippi Exposition.

tigation as I would like to have done, and whether or not any other conclusion would have been formed than indicated above, "I don't know."

Several of the colonies on the general plan also re-swarmed, but I haven't a list of the number; however, all were kept within bounds of increase, and the results are so much in favor of the Golden plan that should I continue bee-keeping another season I will have all things in readiness to fully adopt the Golden method, as I consider, from the experience of the season now closed, that the "Golden" opportunity was offered, and I am glad, indeed, it was accepted by me, as it has certainly been the means of gladdening me for my efforts, and causing the expansion of the purse-strings which otherwise would not have occurred; and I feel confident, let the season be good or bad, Golden's plan will be "Gold," without the "*en*," in my pocket every time; and why?

First, lessening of general expenses; the buying and preparing of hives for swarms, which increases with the size of the apiary, and which cannot be very well avoided on the old or general plan. Second, increast amount of honey secured per colony, which is the great stimulator to the apiarist.

And now I wish to say a little more to Mr. Deacon on hiving a swarm on starters, which he thinks would equal the Golden method. I have never undertaken to make a test, but accept the testimony of others on the matter, that to produce one pound of wax or comb (which is wax) a colony of bees will consume from 10 to 20 pounds of honey. If this be true, then to fill out an 8-frame hive with completed comb when using starters would be about as follows:

It requires 1¼ pounds of medium brood foundation, if using full sheets, to fill eight frames, Langstroth or standard size. In using starters one sheet is generally the amount used to fill eight frames, which would leave in actual amount 17½ ounces of wax or comb to be supplied by the bees, counting that a full sheet of foundation, when drawn out, will make a complete comb. Therefore, Mr. Deacon would lose in honey alone to produce the full quota of combs 11 to 22 pounds of honey. Docs Mr. Deacon realize this, or any part of it, to be a fact?

Golden's method—no comb to be built, sufficient stores in the brood-nest of all kinds to supply hatching brood, and that in progress of rearing from the egg to sealed larvæ in the cells. All these are factors in keeping up the strength of a colony, and causing honey to go upstairs when we want it.

Mr. Deacon was very much worried about pollen in sections, and its preventive, on the Golden plan. Let me say that when I came to assort and clean the sections for market, I failed to find a single trace of any in the sections. Mr. Deacon, don't worry about pollen in sections, and I will tell you to a certainty how to avoid it, if you can keep the secret: Use drone foundation in sections, and fill the sections from the top to ⅜ of an inch of the bottom, and I will guarantee no pollen stored in drone-comb, either in the sections or brood-nest.

I will venture the assertion without fear of being successfully contradicted, that the primary cause of drone-comb being built is for the express purpose of storing or the reception of honey, and from careful observation of the season for building it by the bees has caused me to adopt the theory as stated. I am aware, too, that as bees build drone-comb it may be, and often is, occupied by the queen, especially if prolific, as a good queen, when the season gets productive, will improve every opportunity afforded to strengthen the colony, and as no room appears in worker-comb for the reception of eggs, the occupying of drone-comb results. This, however, does not prove the intent of its production. If it was the intent to rear bees from drone-comb, then the necessary supplies would be stored in it for the purpose, but one of the main factors, viz.: pollen, is always absent.

Whilst reasoning on this subject let me request that Mr. Deacon, or any expert in apiculture, try the following experiment:

At the opening of spring, and prior to nectar coming in from the fields, or at the close of the honey season when colonies are most populous, take the strongest colony, take out one or more frames, insert instead frames with only starters; now stimulate by moderate feeding, and see how much drone-comb you can induce bees to build; but once nectar comes from Nature's resources then is the beginning, and during the season of obtaining nectar from the fields so long will drone-comb be built if the opportunity affords and necessity requires, and the colony is in prime condition. But under no condition or circumstance can a weak colony be induced to build drone-comb, for the reason that no surplus honey is collected, therefore no occasion for the production of drone-comb by the bees.

If I have formed a wrong conception of the cause for the production of drone-comb, as stated, I hope that some of the brighter lights in apiculture will direct me in the straight and right way. Let the right prevail, and the wrong be condemned.

I feel now that I have fully filled my promise to Mr. Deacon, made in my former article, and even wandered from my promise and purpose, which, in the beginning, was only intended to cover a report of my honey crop; but I will ask pardon, and promise to hold my peace for some time to come, after closing with what little I wish yet to add.

I hope Mr. Deacon and many others may be influenced to try Golden's plan next season, and thereby be convinced of its merits over other methods in vogue.

I desire now, in conclusion, to return my hearty thanks to Mr. J. A. Golden and the editor of the American Bee Journal—first, to Mr. Golden for writing and setting forth a treatise on his system, free and untrammeled by patents, to the world; second, to the editor of the American Bee Journal for the prominence he gave the article that the bee-fraternity might have an opportunity of learning of the Golden method, and, if desiring, might put it to the test; and also for the courtesy extended to me in allowing me space to reply to Mr. Deacon. May both live to be honored for their interest in endeavoring to advance the art and science of apiculture.

Somerset Co., Pa.

Answer to Questions on the Golden Method.

BY J. A. GOLDEN.

The following questions have been sent me for answer in the American Bee Journal:

> I wish to ask Mr. J. A. Golden, through the American Bee Journal, in regard to his plan of working for comb honey, as to the passage-ways or space between sections. In using 10-frame hives as made at the factory, and in preparing them with the side entrance he speaks of, I believe he says, to place a strip of thin wood under the ends of the brood-frames, to raise them on a level with the top of the brood-chamber proper. Would this make too great a space under the bottom of the frames? If so, what does he do with so much space?
>
> And in using two single supers prepared in the same way, and put together to hive the swarm in, would not the space be too great between tiers of sections? Also between sections tiered up, when the proper space has been provided before the outside wall has been put on, which would make the space ⅜-inch more.
>
> After hiving a swarm in the double super, and placing the parent colony on top, how soon does he cut queen-cells to prevent after-swarms?
>
> As I am thinking of trying the Golden plan next year, I should be glad for answers to the above. I think I understand the rest of his plan all right, as I have read his articles with much interest. From what little I have learned, I like the Golden plan the best of all the plans I have read about. R. L. HASTIN.

I am glad to give Mr Hastin and all readers of the American Bee Journal the information desired, namely, how to arrange the bee-space of hives as made by the factory.

Take, we will say, a 10-frame dovetail hive to illustrate. Take a gauge set to ¼ inch, and mark each top side of the body, then saw down at each end, and with a draw-knife shave off the ¼ inch. This brings the side body level with the top of the brood-frames. Now lay on the ⅜ cleats on the side body, and tack on the side-board flush with the bottom of the hive, and flush with the top of the end-board, or just as wide as the side board before you cut off the ¼ inch strip. There, now, you see you have ⅜ inch side entrance and a ¼-inch bee-space from the side entrance over the brood-frames.

Now take the supers, and if you use a bee-space above the sections just shave that space from the side body, lay on the ⅜ cleats, and tack on the side-board flush at the bottom, and as high as the end board. Now you have a ⅜-inch side space and a ¼ inch bee-space from the side over the top of the sections.

To make the cleats or rim for the hive to set on take strips ⅜ inch thick, and as wide as the side-board space and outside board is thick, say it is 1¾ inches wide, and with a plane level one side, leaving a space wide enough for the outside board of the hive to set on when placed on the bottom-board. Now you have a ⅜ space under the brood-frames or double super, and into the ⅜ side entrance up and entering into the supers. See?

Now you can change backward and forward, and always have ¼ inch bee-space, but if you use the bee-space at the bottom just reverse the work and raise the brood-frames by a strip under the end of the brood-frames, taking the same width from the bottom of the hive-body. If you winter your bees on the summer stands, set the hive from the stand, turn the beveled strips upside down, and replace the hive, and the side entrances are closed, making a dead-air chamber or space. Do you want any better winter ventilator? I guess not.

I now have some 10-frame hive-bodies in use by taking out one frame, using the nine, making the bee-space inside, letting the thin, tight-fitting adjusting board come up even with the top of the frames.

I hope I have made my answer plain, and as all apiarists of experience know, ample and free ventilation is very essential, not only for the comfort of the bees, but a great factor in curing honey as well. This being so, I want to say to all, that there is no arrangement or method and hive that will compare with my method in this one feature alone, so far as I am acquainted; and by the use of the slatted separators there cannot be improvement in this direction.

While I was writing the above paragraph, a bee-keeper came a long distance to see my hive and method in operation, retiring for the night at a late hour, but to arise at the dawn of day declaring there is no system of manipulation on earth could supersede the Golden method for simplicity and profit; and that he would journey home and subscribe for the American Bee Journal, and by 1899 be fully convinced to change to the Golden method.

As to Mr. Hastin's second question, five to six days after hiving shake or brush the bees from the combs, destroy all queen-cells, and anything that looks like a queen-cell, replace and set the parent hive on the stand, and supers on top. Now remove the cage and queen, and insert a section, put on the cover, and let the queen run in with two or three puffs of smoke. It is a good idea to place a queen-excluding zinc guard at the entrance for two or three days, as some have reported that some colonies swarmed out, but nearly every case proved that a cell was overlookt.

In conclusion, see to it that plenty of room is provided, for there are lots of bees, and more hatching.

Morgan Co., Ohio.

CONVENTION PROCEEDINGS

UNITED STATES BEE-KEEPERS' UNION.

Report of the 29th Annual Convention Held at Omaha, Nebr., Sept. 13-15, 1898.

DR. A. B. MASON, SEC.

[Continued from page 644.]

FIRST DAY—Afternoon Session.

FACING COMB HONEY FOR MARKET.

"Is it advisable to face comb honey for market?"

Mr. Cameron—Yes; and then I think it would be advisable to make all just like the face.

Dr. Mason—I suppose it is meant putting the best on the outside. Farmers that are going by our house face their loads of potatoes, apples and tomatoes, and so forth. I should say no, it is not advisable. I am rather "at sea" on this thing, because we have been putting so much faith in some of our great lights, and they have failed us. Here Doolittle has gone to advising facing comb honey—that is, by implication. Mr. Root recommends certain courses of action to be right. It is a question in my mind whether I had better place any confidence in anybody. It is not a question with me as to whether it is right to deceive people by putting the best outside. Mr. Hutchinson, I believe, says that you don't deceive anybody—that they expect it. If he is right, then it is right to face comb honey, or anything else. A gentleman came along by our house yesterday morning with potatoes—very nice on top. I said to him, "Are they the same all through?" He said, "Yes, sir." I took his word for it—thought it was perfectly good. I turned the potatoes into a basket bottom side up, and they weren't half as good. That was deception, and he mist a sale. Is there any question as to whether it is right or not? I think not. I lived on a farm once myself, and sold a good deal of produce, and I found it to be a bad practice to "face," whether it was potatoes, or onions, or anything else.

Mr. Cameron—How would it do to put the best in the bottom?

Dr. Mason—That pays. Among those who patronize you, you get the name of being a square dealer. It does not pay to put the best on top, besides being absolutely dishonest. I don't say that that is my opinion; I say it is so, and I can prove it.

J. H. Masters—In packing apples it is usual to face the bottoms of the barrels—and then reverse the barrels.

Mr. Danzenbaker—Facing is universally practiced with apples. You open a barrel of apples that has the brand on it —Baldwins, or Greenings, or whatever it may be—and you take the head out and you find the barrel faced. If you don't find any good ones on top you can conclude that there are no good ones there. There are, of course, packers whose name on the barrels is a guaranty. I sort my honey before it goes into the case. I pick out four for the front, and then say to the merchant, "If there is any in there that you can't sell for 20 cents, put it aside for me. They want it to look as nice as possible, because they pile it up to make a show. If I had some that was travel-stained I would put some travel-stained at the front. That kind of facing is honest. I have never had a case come back to me on a complaint. I do not face with white honey at the front and put dark behind. We face just as we paint a house or hang up window-curtains to make it look nice. If there is good honey in the case it must be shown. If they don't see it they conclude that there is no good in it.

E. R. Root—I would say that I at first sided with Mr. Doolittle, and when I found I had made a mistake I got off of the fence. I might say that there is perhaps a species of facing that is not dishonest, and there is a kind of facing that is certainly dishonest. I don't believe there is any one here who would think it proper to put buckwheat honey into the case and have it faced with white honey. I don't know that I would do it myself, but if some one sold me a case of honey with the best sections in front, I don't know that I would say he intended to deceive me. It would depend on how far he intended to pick out the best sections. I believe that nearly all honey that goes on the market is faced somewhat. It is so easy to put one or two of the best sections in front. I never think that the best sections will be in the rear or in the center, and for that reason when we buy honey from the dealer's standpoint we generally take off the cover and pull out a section or two from the body of the case. We go rather by the inside of the case than by the face. That would seem to argue that all honey is faced to a certain extent; for that reason we prefer to see what is on the inside.

Dr. Mason—Why do you look in the center of the case?

E. R. Root—Because we want to know exactly what the honey is all the way through.

Dr. Mason—Then you are afraid it is faced?

E. R. Root—We are afraid it is faced.

Dr. Mason—The question is, "Is it advisable to face comb honey?"

E. R. Root—I don't think it is.

A. I. Root—This question has been up quite extensively in the fruit papers. They make a certain compromise, that there is no harm in fixing a case of strawberries or peaches or other fruit so that the best side of the red cheek is uppermost. There might be a difference of opinion in regard to that. Some say it is like exhorting the members of a family to "put their best foot forward." I think it pays to take pains to make things look nice and attractive, but I don't think it pays to cheat in any shape or manner. Making a good appearance has everything to do with selling your stuff. For instance, Mr. Selser has the handsomest honey-wagons I ever saw in my life. I believe that his wagons have a great deal to do with his sales in the city markets. You ought to make everything look as well as possible without cheating anybody.

Dr. Miller—This is one of the topics that has been pretty thoroughly discust, and yet I think it can be profitably discust here. Whilst there has been some feeling about the matter, I think if we would all look at it from the same standpoint, we would all see it about alike. I don't believe there is a more honest man than G. M. Doolittle. He doesn't look at the matter exactly as some of the rest of us do. I am not sure that he looks at it from the right standpoint. He looks at it in this way: When you send honey to a commission man you send it with the understanding that he has the whole thing before him, and it is his business to look and find out what there is in it, and with that understanding he says facing is entirely right—that it is right that I shall put buckwheat honey in the middle of the case and my best honey in front. If that argument is all right, then Mr. Doolittle is entirely right. But I don't believe it is straight. I think when you send honey to a commission man he expects the honey outside to be the same—to be a representation of the whole thing. Mr. Ernest Root tells us they look on the inside of the cases; but they do not look on the inside because they think the outside ought to be a fair representation of the whole. The feeling in their minds when they open the case is that the outside ought to be a fair representation. There is a certain way in which I believe it is right to put the best side out. The cloth on the inside of my coat is all right for where it is; but it does not cost as much as the cloth on the outside, and is not as good. I want to have the best side out. There is no deception about it. You do not expect that the inside is the same as the outside. When you put a section of honey on the table you put the best side uppermost. It looks better that way. In the same way I believe it is right—altho W. Z. Hutchinson "called me down" on it—I believe it is right to put the best side of the sections out. I want them to be a fair representation of what is in the case. I have had a great deal of quarreling about that in having my honey packt—more than about anything else connected with the whole business. When I say that I want the front to be a fair representation of the whole case, I mean that when those three sections are taken out they shall be as good as any other three in the case, but no better, taking the sections at random. I want the packers to put three sections in front that will be a fair representation of the whole, but I want them to put the best side of the sections out. That is not deception at all. I think when I put better sections next the glass than I put in the middle I am hurting my trade. I am in this business to make money, and I avoid doing some things because that will help me in making money, not entirely because they are dishonest. I like to have my honey so that men will buy of me year after year and not want to look at it at all. I remember that I sold a great deal to a certain man. The first time he lookt over the honey; the second time he did not. I happened to meet him in company with others, and he said, "I buy honey every year from him. No trouble. Every box just alike." It is not advisable to do anything that deceives. I think the failure to agree with Mr. Doolittle comes entirely from this: He takes the ground that when he sends honey to a commission man the commission man does not expect that the outside, next the glass, is intended to represent the whole case. I know that as honey is generally sold there is more or less of such an expectation that the outside will be representation of the whole; and so long as there is that expectation I think we ought to gratify it by making the outside a fair representation of the entire case. Failure to do that loses us money in the long run.

Mr. Danzenbaker—I grade my honey in three grades; the first grade I sell for 15 cents; the second grade for 13 cents, and then I have a third grade that I sell for 10 and 11 cents that is not all filled. I believe in making things look nice. I produced honey with a man once, and he took part of the honey for home use. He would save the sections and want those sections used over again the next year, but I said I wasn't willing to take those sections, and if he wanted to use them over he must take them himself. If white honey is in dark sections that are a year old, it would take 5 cents off the price. Stained and discolored sections make a difference of 5 cents in the retail price. That same thing applies to facing honey. A clean shipping-case will make it sell in a commission-man's hands, while an old case will detract from the selling price.

Dr. Miller—The hardest thing I have to contend with in that matter is this: Here is a lot of honey that is set off to one side as fancy, and in another place is No. 1. Out of that fancy I pick out 12 sections to be put into a case, and out of those 12 sections I pick out the three best and put them next the glass—it is all fancy honey; there is nothing but fancy honey shown there, and yet it is "faced." That is the hard thing to me. They say there is no deception in that because it is all fancy honey, so the front represents what it is. Then I ask the one who says that, "Isn't that honey next the glass a little better than the rest of the case?" "Certainly it is." "Doesn't the buyer expect it to be all just as good as what is next the glass? Won't he be deceived when he comes to open it and finds that the inside is not quite as good as the outside?" When it comes down to that we must admit that he will be. When it has been sorted out in piles and the best pickt out and put next the glass there is where the deception comes in. Then suppose you have hired packers; they take delight in having things look well, and you have got to watch them to prevent their deceiving. You will cheat more in that way than in almost any other if you don't watch. You must watch the packers.

Pres. York—I don't think it is a question of deceiving the commission men; it is a question of deceiving the final purchaser of the goods.

Mr. Miles—I would like to offer a thought about No. 1 and fancy. I find in selling honey that there is hardly any one that knows the difference between what we pack as No. 1 and what we pack as fancy; so they would never know they were deceived; they wouldn't recognize that it was faced, and there would be no deception as there would be if we put buckwheat in.

IS COMB HONEY ADULTERATED?

"Is comb honey adulterated, or has it ever been?"

H. L. Miller—I have heard it reported that they have machines at the glucose factories for producing comb and making honey.

E. H. Bridenstine—I heard that it was manufactured here in Omaha, and I wish to find out.

J. F. Spaulding—If we can find such a place I move that we move on it in a body.

Mr. Whitcomb—We have several grocers who say they sell comb honey that is adulterated. I doubt it. I don't believe it can be done. The idea has got out, and it is sold to their customers as manufactured comb honey, mainly, I believe, to get rid of a poor sample. I doubt if anybody has ever been able to manufacture comb honey.

Mr. Spaulding—I would like a showing of hands here if there is any one who believes that comb honey has been manufactured.

On a call for a showing of hands no hands were raised in the affirmative.

Dr. Miller—As to the answer to that question, we must be a little careful. I am not *sure* but there is such a thing as adulterated comb honey, but if the question read, "Have you ever seen a pound of comb honey made without the interposition of the bee?" then we could say that no man has ever seen it or ever will see it; but whether comb honey is adulterated is a different thing. It is not on the market to any extent because there is no money in it.

E. R. Root—We have made an offer of $1,000 that we will pay to any person who will produce a single sample of comb honey that cannot be detected from the genuine. One or two have been foolish enough to try to take up that offer. We received one sample where a cake of wax had had numerous holes bored through it, and the holes were filled and the comb sealed. Of course it did not get the reward, because it could be detected from the genuine. We are trying every year to feed pure glucose to bees. I learned this summer that you could dilute it down with water and they would take it, provided there was nothing else that was coming in. But I don't believe there is any adulterated comb honey on the market.

Pres. York—I am very tired of having people come to my office who have some story to tell of comb honey being manufactured in Chicago. I have often said to them that if they will take the time I will, and we will go and find it. It cannot be done. I have simply laught at such people as believe that comb honey has been manufactured or can be. I think it is utterly impossible.

Mr. Danzenbaker—I don't think that bees will take glucose and put it into comb. Some years ago the secretary of a glucose manufactory boarded with me. There were bees in the yard, and he took great interest in them. It was a hobby with him. In the early mornings he would be out there and have the hives open, and I found out that he was experimenting with the glucose. He brought glucose and put it into the tops of the hives. I wondered what he was doing, and I found the glucose there. The bees would not take it. Then he took the best glucose sugar and put it in, and the bees wouldn't take it. It was during the honey season, and he thought the bees would mix it with the honey that was coming in from the field. He meant to keep bees. He imported a lot of Italian queens, and was thinking of making honey out of glucose, but the bees wouldn't touch it. I believe that the acid in the glucose would finally kill the bees. They have an instinct of sense that enables them to detect it.

Pres. York—I would like to give one instance of feeding glucose to bees that I know of. Mr. Grabbe, some years ago, was interested in bees with Mr. Perrine, in Chicago, who was one of the biggest adulterators in the State at that time. They moved two or three hundred colonies to Mississippi and began feeding glucose, and it was scarcely any time at all until they had killed all their bees.

A Member—What is the best way of combating the idea that comb honey can be made without the aid of bees?

Dr. Mason—Subsidize the press.

Mr. Whitcomb—Kill off the fools.

Mr. Danzenbaker—Last year at Buffalo this question was raised and talkt about. I remember mentioning a story that was publisht in Washington about the manufacture of comb honey. I had a great deal of trouble with that story in the market. People would say my honey was manufactured. I presented them with the argument that has been made here, but I made it a little stronger: I said if there is a man in the United States that can produce one square inch of comb honey by manufacturing it, there is a chance for him to make a thousand dollars. I went to the editor of the Washington Star with an article and askt him to publish it. He said he didn't want to do it. I said, "You are bound to do it because you have publisht a lie here, and there are storekeepers here who are tired of answering questions about the matter. Do it or say you won't do it, and I will go and tell them that you refuse." He did publish quite a long article. I went to the Post editor, and he said he would have to refer me to the advertising editor. He wanted to charge advertising rates to publish that article. I said that in his Sunday edition (which is the largest edition in the city) he had pulisht that lie to deceive the people, and I thought it was due to the people that he should publish the truth. But he wouldn't tell the truth without being paid advertising rates.

Dr. Mason—I believe just as I answered at first—subsidize the press. Most of us live in localities where papers are publisht. We can take the editor a sample of honey and illustrate to him how it is produced, and he will become interested. The Toledo Blade has a large circulation, and I do not have any trouble in getting into the paper anything I want in that line. They are anxious that the articles shall be brief and to the point, and I show to the editor some comb honey and tell him how it is produced, and all about it. If I can, I take along some bees.

Mr. Danzenbaker—I took a box of honey with me—six pounds, and I left a box of honey with the editor of the Star. I took another box to the editor of the Post, and showed it to him, and told him I would like him to have that—if he had a family, I would like him to take it home and test it—that I would make him a present of it. He took it as an offense. He acted as if he thought I was trying to bribe him. I have found Dr. Miller's article on the food value of honey, or honey as food, to be a great help. I have scattered it among the people, and I would leave in the stores a hundred or two and tell them to give them to their customers. I gave one of those pamphlets to a lady on the market, and the next day she came to me and said she had read it, and she wanted a box of honey. Three weeks afterward she came to me and told me her son had had la grippe, and that the honey I had sold her had cured him. She turned to three or four ladies there and told them about it, and they all bought honey.

Mr. Whitcomb—Dr. Mason insinuates that the press of Nebraska has not been subsidized. Not very long ago a gentleman here in the room undertook to get a write-up into one of our Omaha papers. The person who undertook to do the writing carried away the honey all regular, and then as a return he wrote that the gentleman who gave him the honey said that the Nebraska bee-keepers were using a new system—that they put into the hive sheets of glass so that when the bees were making the comb they could back up against the glass, and so get the comb all straight and nice. [Laughter.] You will often find that you will do better to write the articles yourself.

THE FOOD VALUE OF HONEY.

Mr. Whitcomb—I think we entirely underrate the food value of honey. I think one pound of honey contains more nutriment than two pounds of pork. I don't believe there is any family that uses honey to any extent that has any use for a doctor. I don't believe there is anything in pure honey that is not assimilated by the system. I believe it is the only thing we eat or drink in which there is not something left to be thrown off. In my institute work over this State I have made inquiries concerning unhealthy children in families where honey has entered into their diet every day. I don't believe unhealthy children can be found in those families which use honey as an every-day diet.

Dr. Miller—I have heard Mr. Whitcomb go over that story time after time—

Mr. Whitcomb—I have told it so many times that I believe it to be a fact. [Laughter.]

Dr. Miller—I want to say that if the rest of you will do that same thing the people will soon know more about honey than they do. I don't believe you know anything about the medicinal value of honey as you should; I don't believe you know the food value of honey as you should; I don't believe you know the difference between honey and sugar as you should. We have people dying all about us because of the over-use of sugar. Does more than one out of every half-dozen use honey in his coffee in place of sugar, with the knowledge that he is going to prolong his life by it?

Mr. Danzenbaker—There is one point in regard to the natural craving of all children for sweets. Every parent knows how they long for sweets. People look upon honey as too much of a luxury. I have seen people go by in the market with children, and the children would stop and come back to look at the honey, and I would say to the mother that the natural craving of that child was for sweets, and that she ought to give him honey. I would hand her one of those leaflets, and probably the next time she came along I would sell to her. The reason there is not more honey used to-day is because grown-up people didn't have it when they were children. Children desire it. We want to teach parents their duty to buy it for their children.

Dr. Mason—We used considerable honey in our family during the time of la grippe, and we discovered one thing—I think I have already said something about it: Those of our family who used plenty of honey didn't have la grippe, and those who hadn't used it did.

D. A. McGregor—I have the la grippe pretty nearly every winter, and I use more honey than almost any one else.

Mr. Danzenbaker—I have never had the la grippe in my life.

Mr. Cameron—How much longer would a man live who used honey instead of sugar?

Dr. Miller—I don't know, but I do know that there are men dead to-day who would be living if they had used honey in the place of sugar. Sugar affects the kidneys.

EXTRACTED VS. COMB HONEY FOR HEALTH.

"Do you think that extracted honey is more healthful than comb honey? Is the wax in comb honey a detriment to health?"

Dr. Miller—It depends on the character of the honey. I don't know any reason why extracted honey might not be just as good as comb honey. As a matter of fact, I believe the average sample of comb honey as you find it on the market is better than the average sample of extracted honey. It is better ripened, because the honey is left until it is sealed. Sometimes the bees may seal unripened honey, but as a rule they do not; and while those who extract honey might always leave it until it is ripened, as a rule they do not. So you may have a sample of extracted honey that is just as good as the best comb honey, but the average sample is not so good as the average sample of comb honey. As to the matter of the wax, it is indigestible, but I don't think it makes much difference. It is simply that there are particles of foreign matter there. I think at one time Mr. Bingham stated that the particles of wax helpt to flavor the honey; but I don't believe they do, as the wax itself has scarcely any flavor.

Mr. Whitcomb—The honey is not to blame because we take it unripened. Because the bee-keeper takes the honey before it is ripened, that ought not to be charged as a fault of the honey.

Dr. Miller—Take it as it is found on the market, and the best extracted honey is just as good as the best comb honey. If I were to take it for my own use I would rather have the extracted, because the wax is indigestible, and while it may not do any harm it doesn't do any good. There is a possibility that it may do an infinitesimal amount of harm.

Mr. Cameron—How do you know that wax is indigestible?

Dr. Miller—Practically I don't know it, but I feel confident of it. I do not know it so well that I could give you positive proof of it, but I think I could by taking time for it. Some of you may remember that your grandmothers used corks of beeswax to close bottles of sulphuric acid. The wax was not affected by the strongest sulphuric acid, and I doubt if it can be affected by the weaker hydrochloric acid of the human stomach. I think that is pretty good proof.

Mr. Cameron—I know that bee-keepers hold that view of it, but I have never seen any proofs. There is a worm that lives on beeswax, and it seems if the worm can digest it a man ought to.

Dr. Miller—Because a worm can digest it is no proof that a man can.

(Continued next week.)

Honey as Food is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey among should-be consumers. The forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 30 cents; 50 for 50 cents; 100 for 90 cents; 250 for $2.00; 500 for $3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all other bee-keepers possible to subscribe for it.

QUESTIONS AND ANSWERS

CONDUCTED BY
DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

A Robbed Colony.

I have a colony of bees that the rest got to robbing, and I moved it away about 30 yards and shut it up so that only one bee could get in at a time, and yet they came and robbed, so I shut them up tight, and the robbers would come yet and fly around the hive. When I would open it, the rest would begin to rob. What am I to do with it? and what is the trouble? It is in a box-hive. NEW JERSEY.

ANSWER.—Moving the hive to a new place was hardly the right thing. It only made matters worse. For when you moved them to a new place, the colony would be just that much weaker to defend itself, for when the field-bees went out to forage, instead of coming back to their hive in its new place they would go back to the old stand, and then join the colony that stood nearest. It would have done more good if you had left them right on the old stand, shutting the entrance as you did, then piling loose straw or hay as high as the top of the hive and keeping it wet. Possibly that treatment may do yet. But don't move the hive back to its old stand now, for by this time they have become so used to the new place that moving would cause more loss. If you will look carefully through late numbers of this paper you will see several plans for fighting against robbers. One of the latest, and one which is worth trying, is to put naphthaline or moth-balls at the entrance. The odor is so disagreeable that it is said the robbers will not pass by it, while it does not hinder the bees that belong to the hive.

But a good deal depends on the condition of the colony. If it is queenless, it's hardly worth while to do anything but just to let it stand and let the robbers finish their work.

A Beginner's Seven Questions.

1. What is the best way to bring a small colony of bees through the winter?

2. I have six colonies with young queens which were hatcht late in August and began to lay eggs the beginning of September. Will these colonies swarm next year in May or June, if they get through the winter, if the season is a good one for swarming?

3. How many times does a queen swarm in her life?

4. I have a queen in one of my hives which has her wings clipt, and as I thought that colony would not swarm, I was trying to run it for comb honey, but unexpectedly a swarm came out and went into one of my other hives. What gave them the swarming-fever, as their queen could not fly? Is there a way to prevent swarming in colonies that have wing-clipt queens?

5. On the other hand, I have three colonies with good queens, and they did not swarm, even not the one into which the queenless swarm went. Why did they not swarm?

6. Is there any way to force bees of a colony to send out two or three swarms?

7. What are hybrid bees? NEW YORK.

ANSWERS.—1. A colony too weak to be brought through alone, may come through all right by having the benefit of the heat from a stronger colony. Even two weaklings may come through together when they would not do so alone. Put both into the same hive with a division-board between them, the board being not more than ⅜ of an inch thick and made bee-tight, so that no bee can pass from one side to the other. A weak colony will do better in the cellar than on the summer stand.

2. Very likely they will, altho not so sure to swarm as if the queens were older.

3. There is no rule about it. She may never swarm, and she may swarm half a dozen times.

4. Clipping the queen's wings doesn't have the least effect to stop the bees from wanting to swarm. They'll try to swarm just as much as if the queen had never been clipt. How to prevent swarming in a satisfactory manner, either with queens clipt or unclipt, is and has been a question that has puzzled the brains of many, and I don't know any one in the world that can answer it.

5. The difference may have been in the character of the bees themselves. Some bees are five times as much given to swarming as others. The difference may have been in conditions. One colony may be stronger than another, may be more crowded for room, or there may be differences in other respects. Sometimes one colony will swarm and another beside it will not, and you can't see a shadow of difference in the character or condition of each; the only thing you know for sure is that one swarmed and the other didn't.

6. Perhaps there is no sure way to make a colony send out a second swarm if you leave it on its own stand. But you may accomplish it by moving. When the colony sends out a swarm, put the swarm on the old stand and put the old hive in place of a strong colony, putting the latter in a new place. When the next swarm issues, do the same thing again, and repeat as often as a swarm issues, each time leaving the swarm on the stand where it came from and putting the old hive in place of another strong colony. In that way you may have a half dozen or more strong colonies from the same hive. There is some advantage in the plan if the swarming colony is of superior blood, for in that case you have good blood in each swarm.

7. The word "hybrid" is perhaps not the word that ought to be used, "cross" being a better word, but "hybrid" has been used so much that it will not easily be given up. Let bees cross in breeding, as when an Italian queen meets a black drone, and the bees from that queen will be called hybrids.

Difference in Color of Honey Cappings.

A few days ago I took two supers off of two hives which stand next to each other. Both supers had been put on the hives the same day, and both were filled well, and all sections were well capt with the exception of the two outside rows, which had some sections not fully capt. The bees in both hives were very dark hybrids, mostly black. Everything in the two hives seems to be as much alike as can be, but there is this difference: While the cappings of the cells in one super are perfectly white, the cappings in the other super are a golden yellow. The honey in both supers is of light yellow color. What is the cause of the different color of cappings in these two supers?

These were the only supers I took off this year, the others being still on the hives. Bees have not done well. I had 33 colonies last spring and increase to 38. I had to unite two colonies with others, which were queenless, making seven new swarms, but as my bees commenced to swarm April 28, and the last swarm which I caught came out Sept. 2, I have lost a number of swarms not being able to be at home all the time. I have some colonies working in second supers, but most will not fill more than one super, and some will have them only partly filled, so that 24 pounds per hive will probably be the yield. The weather is favorable now, and bees work well on fall flowers. MISSOURI.

ANSWER.—It is possible that notwithstanding the honey appears alike, the bees of the two colonies were gathering from different sources. It is also possible that they gathered from the same source, but that one colony was much given to painting with propolis, and so put a thin coating over the cappings, a very thin coating sufficing to color the comb.

Bees on Shares—Wooden Combs.

1. What share of honey and new swarms should each have provided the one that takes the bees furnishes the hives for new swarms, sections, supers, etc., and does all the work attending to them and marketing the honey? Is it customary to divide up the new swarms every year, or to keep them for a specified number of years, say five, then for the first party to take out the number of colonies he gave the second party, and divide the balance.

2. What is the modus operandi of L. A. Aspinwall's dummies to keep bees from swarming? PENNSYLVANIA.

ANSWERS.—1. Share business in bee-keeping is one of the hardest things to tell anything about in the whole range of bee-keeping. There is no rule to go by. Each case is a law unto itself. In the case you mention, A furnishes the bees and B does all the rest. Now it depends altogether on the kind of bee-keeper B is, as to what he should have. If he merely hives the swarms and takes off the honey, his share need not be so large as if he were a thoroughly informed bee-keeper, and gave the bees the fullest and best care. Suppose

B is an up-to-date bee-keeper. A furnishes 10 colonies of bees. If there is no swarming, and A gets one-third of the pay for the honey, he ought to be satisfied. Perhaps one-fourth would be enough, for he still has the 10 colonies left, and all that he needs pay for is the interest on the money invested in the bees and the wear and tear of the hives and contents. If there are swarms, he should have a share of them, or its equivalent in the honey. But it's all as you make the bargain, and everything should be put down in black and white, so there can be no possible misunderstanding, for the chances are that if you go into the share business and are the best friends in the world, you may not be on speaking terms when the dicker is over. You can settle up and begin over again every year, or you can make an arrangement for a given number of years.

2. The dummies are practically wooden combs with holes bored for cells, only there are no bottoms to the cells, the holes being bored clear through the wood. The idea seems to be that the bees think they have a lot of empty combs, but as there are no cell bottoms they can't fill them, and so long as they find lots of empty cells they hardly think it necessary to swarm.

How and When to Transfer.

What is the best plan, and when, to change a colony of bees from a box-hive into a Langstroth hive? I placed the Langstroth hive on top of the box-hive the past summer, and as there is about 40 pounds of honey in it, I thought I would move them into it this fall. ILLINOIS.

ANSWER.—With 40 pounds of honey in the Langstroth hive, there ought to be little trouble. You can drum all the bees out of the box-hive, letting them run into the frame hive, then set the hives back as they were, putting a queen-excluder between, so that the queen will be fastened in the upper or frame hive. Possibly, however, the queen is already in the upper hive, in which case there will be no need of drumming. Perhaps you will do well to attend to it right away, altho it could be left till spring.

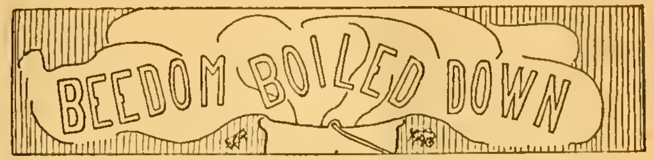
Finding the Queen in a Large Colony.

I have great difficulty in finding the queen in a moderately large colony, or in telling with certainty when a colony is queenless. Is there no invention that would aid us in catching the queen when it is desired to do so? If so, what is it, and where can I buy it? Is the Hannemann bee-sieve used for this purpose? TEXAS.

ANSWERS.—Finding a queen readily is largely a matter of practice. In back numbers of the present volume of this journal you will find some hints that will be useful, and as you will probably not want to do a great deal more in the way of finding queens till next spring, it will be a good plan to load up with information through the winter. Often a second reading at one's leisure will be of more benefit than the first reading, which is perhaps somewhat hurried.

But you can generally tell whether a colony is queenless without seeing the queen. Indeed, it is more satisfactory to see the brood than to see the queen. For you may find a beautiful queen present and yet the colony may be worse off than if they had no queen at all. For the finest looking queen in the world may be a drone-layer, and the colony is better off after you've killed her. So whether you see the queen or not, look at the brood. If eggs are present, brood in all stages, and the brood sealed in worker-cells has a flat surface and doesn't look like a lot of little marbles laid together, you may know that they have a queen that is all right.

Yes, you can have something to help catch the queen, and it's probably what you mean by a "Hannemann sieve." Plan any way you like to have the bees pass through queen-excluding perforated zinc, and the workers will pass and the queen be left. You may arrange this at the entrance, or otherwise. One way is this: Fasten on the bottom of a hive-body a queen-excluder, and call it your "sieve." Lift the hive from its stand and set an empty hive in its place. Take out a frame of brood, brush all the bees from it in the old hive with the rest of the bees, and then put this frame of brood in the empty hive on the stand. Set your sieve on top of this hive on the stand. Now brush off each comb, one after another, brushing the bees into the sieve. As fast as you brush off a comb, put it into another hive, for if you put it back where the bees are, the queen may crawl upon it and your work will be to do over again. Sometimes the bees will all run promptly down, leaving the queen alone in the sieve, and sometimes you will need to use a little smoke to drive them down.



Heather Swarms are cheap in Germany. C. Burgdorff advertises them in Gravenhorst's Bztg. at 63 cents to $1.00 each, and laying queens at 38 cents each.

Facing Honey-Cases is discust by Somnambulist in the Progressive Bee-Keeper, who mentions two cents a pound difference in honey caused by the manner of packing, as also 15 to 20 cents a basket on peaches. He doesn't leave it entirely clear whether the goods with the better facing got the higher price or not, but closes by saying that "honest facing is not an impossibility."

The "Changing" Cure for Bee-Paralysis.—A colony of bees had paralysis so badly, says W. A. Pryal, in Gleanings, that the bees were dwindling rapidly, hundreds crawling from the hive each morning, and a quart of dead bees being sometimes in front of the hive. He made the diseased colony exchange places with a healthy one, and the effect was magical; no more dead bees in front of either hive.

Bee-Space Between Combs.—The question has been somewhat discust as to whether ¼ or 3/16 was the space left by the bees between two combs of honey sealed over. Some testimony seemed to show that blacks left a smaller space than Italians. T. H. Kloer says in Gleanings that his Italians average 3/16, and he thinks that where they leave a space of ¼ that the bees had too much room, or else the honey-flow was too scant. The editor now calls for more reports, for the thickness of the cleats of fences depends on the space that the bees favor.

The Honey Crop.—Taking the whole world at large on both sides the ocean, 1898 will be remembered as a year of failure for bee-keepers. The Canadian Bee Journal reports Canada as an exception. "In a few localities of limited areas it has been light; in others a good crop, and in a very large portion of the honey-producing districts the crop has been very heavy." But the journal complains that honey has been rusht on the market at too low prices, stores having filled up at as low as 5 and 5½ cents for first-class extracted, and 4¼x4¼ sections being sold as low as 7½ cents a section.

"Grading Honey; Doolittle's position again defined; does not recommend or practice facing." Such is the heading of an article in Gleanings by G. M. Doolittle. He says no one can carry "in his eye" the difference between fancy and No. 1 ten rods. More than that, if one side of a case is faced with No. 1, and the other side with fancy, he can hardly tell the difference, but if the two kinds are placed side by side the difference is easily told. He disapproves of putting No. 1 and fancy in same case, and even of sending to same place. He ships fancy to one man and No. 1 to another, and thus gets as much for No. 1 as for fancy. He thinks Messrs. York, Hasty and Miller have been attributing to him something he neither did nor even recommended, saying: "Just what I do do, and just what I recommend, is an honest sorting of honey by the X plan as given above, then pick the 'prettiest faces' out of each lot and place them on the outside."

The Right Hive is discust in the Progressive Bee-Keeper by Messrs. Aikin and Doolittle. Both agree that movable frames are of no use to the bees, and of no use to the bee-keeper who never lifts them out of the hive. Aikin thinks the best size and shape to suit the bees is 16x16x24 inches, 24 being the height, altho a little variation from this might be made to suit the bee-keeper; he hints that 15x17 might be a good size, but wants the height greater than the length, and the brood-chamber in sections five or six inches deep. The 16x16x24 size calls from Doolittle the exclamation, "Shades of Huber! whither are we drifting?" He figures the contents of such a hive at 6,144, when Quinby gave 2,000 to 2,500, and prophecies that no comb honey would ever be taken with the large size. The suggestion of hive-sections five or six inches deep makes Doolittle "fighting mad," and he says he has some "chunks of logic regarding how the bees will be brooding sticks and vacant space during the time they should be brooding queen eggs and larval and pupa bees, etc."

AMERICAN
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

PUBLISHT WEEKLY BY
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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 38. OCTOBER 20, 1898. NO. 42.

EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Selling Honey by Sample.—One of our agricultural exchanges contained the following advice to those who have honey to sell:

> "The best way to advertise honey is to give samples to those whose patronage the producer may desire. The way to advertise is to secure small sections, those that will hold a half pound, or even less, if one does not feel that he can afford to give pound or half-pound samples away. Get enough such sections to answer the need of samples, and place them on the hives at the opening of the honey-gathering season. When they are filled, label them, and distribute them. Following such samples within a week, the farmer will find purchasers, providing the samples were of fine quality.
>
> "This sample system of advertising is largely carried on by merchants in the villages, towns and cities, and it is considered a highly successful system. When once a customer has taken honey from the farmer, he is likely to become a regular customer. The farmers in some sections take their honey to grocery stores in the villages and cities and leave it on sale, periodically collecting from the grocerymen for all that is sold, and allowing the store men a commission on the sales. In many sections of New York and Pennsylvania both these methods are pronounced economical and successful."

No doubt, like almost everything else, the best way to work up a demand for honey among consumers, is first to hand to them free samples. People usually prefer to taste of the good things they are askt to buy; then if they like them they will be more apt to purchase.

We wonder that more honey-producers, when they run out of their own honey, do not buy elsewhere, and keep their customers supplied. They would thus not only be doing a good turn to the one they purchast from, but would also benefit their customers and themselves at the same time. In the whole transaction three or more persons would be helpt. It seems a pity that when once a bee-keeper has regular customers, he should neglect to supply them with honey.

* * *

Quality of Sweet Clover Honey.—The great range of opinion regarding sweet clover honey, some calling it disagreeable and some the finest, according to light brought out at Omaha, seems to be due to the fact that sweet clover honey must be thoroughly ripened to bring out its fine flavor. The editor of Gleanings says:

> "The honey that Mr. York, editor of the American Bee Journal, produced has been pronounced as being of very fine quality, and he was of the opinion that it was largely sweet clover. When I first tasted some of his honey a couple of years ago, I remember I thought it had the most delightful flavor of anything I had ever tried; but at that time neither Mr. York nor myself knew its source; but on my last visit he was quite certain that it was from sweet clover. That same delightful minty taste was present. At the convention some thought that sweet clover honey was a little better when mixt with something else. Perhaps this is true, for Mr. York's honey, besides the sweet clover, has evidently a mixture of other flora that abounds in his vicinity."

* * *

Dishonest Facing of Comb Honey.—In this number of the Bee Journal will be found several references to the subject of facing comb honey—in the Omaha convention report, and in the departments of "Question-Box" and "Beedom Boiled Down."

Of course there is an honest facing of honey and a *dis*honest one. The former needs encouraging, but the latter needs not only discouraging, but a sudden death and speedy burial.

About two weeks ago R. A. Burnett & Co., the leading and oldest honey-dealing specialists in this city, sent us this note:

> "MR. YORK:—If you have a chance to-day, drop in and see honey packt *a la* Doolittle."

We were glad to call, as suggested, as we thought it might furnish a good text for an editorial.

The honey in question had come from a Granton, Wis., bee-keeper, accompanied by the following letter:

> "I made a shipment of honey this day—16 cases of fancy white comb honey—521⅛ pounds, net weight......If you do well on this shipment I will make you another."

Upon receipt of the honey, Messrs. Burnett & Co. wrote Mr. Man thus:

> "DEAR SIR:—Honey has come, and it is hurt a little in transit, but that would not matter much if it had been honestly packt. We opened a case that was leaking, to see how badly it was injured, and our surprise was great to find combs with cells nearly all empty; others with center filled and the rest empty; others one side of comb fairly well filled and other side nearly empty; others with dark honey and all stages of filled cells. To protect your interests we are obliged to assort it or sell for a low price; we have decided to assort.
>
> "P. S.—Since writing the foregoing, one of the former lot has been returned to us, and we don't know how many will be, as it all appears to have been mixt."

Well, we saw several cases of the above lot of "*fancy white* comb honey" opened up, and must say that we never had seen anything like it before. The front row of sections, next to the glass, were beautiful—white, well filled and sealed. But back of them—well, we could scarcely believe a sane man would case honey for market in that way; and also call it "fancy white!"

We believe there were some sections of simply *empty comb*—not a drop of honey in it! Then there were half-filled sections, uncapt sections, dark combs, light combs, etc. And the whole was put up in 24-pound *double-tier* shipping-cases, which no up-to-date bee-keeper should think of using.

As the shipper of the above honey does not read the Bee

Journal, he of course had not seen the rather warm discussion in the bee-papers on facing comb honey, about two months ago. He simply fixt it up to suit his dishonest pleasure.

One case of the honey we saw opened had been taken by a customer of Burnett & Co. without opening, and of course was returned at once.

It is just as we said some time ago, it is *wrong* to face up cases of honey for market, no matter to whom or where they are sold. In this case, the commission man received the blame, when the deception was entirely on the side of the shipper. Goodness knows, the city dealers have enough sins of their own to answer for without the producers trying to unload their shortcomings also upon them.

As will be seen by Mr. Doolittle's answer in the "Question Box," he does not now, if he ever did, endorse the foregoing method of packing comb honey for market, altho a couple of months ago he seemed to think it would be all right provided the honey was sold *on commission*, and the *shipper thought it to his interest to do so*. We doubt if Mr. D. still holds such views. We surely do not, for we are free to say we don't believe that, because a man may *think* it is right to follow a certain procedure, that makes it right. Not by any means. A man may think, or believe, that it's *right* to whip his wife, or swear, or get drunk, or do anything else that is morally *wrong* in the eyes of those who have educated consciences. But his believing it right, or to his interest to do so, doesn't make it so, by a long shot.

Our advice to bee-keepers, when putting up honey for market, is to pack it *honestly*, so that no matter who buys it, they will not feel that they have been swindled, or deceived.

◆

Two Departments in Gleanings in Bee-Culture that have been somewhat conspicuous by their absence, are beginning to appear more regularly. They are "Reports Encouraging" and "Reports Discouraging," the former taking up the most space.

◆

The Critic Criticised.—The Review critic, Hon. R. L. Taylor, has given considerable attention to the literary character of Gleanings, and the editor of Gleanings makes some reply in his number for Oct. 1. He seems to think it would be better for Mr. Taylor to stick to his legitimate work, which Mr. Root considers to be to criticise theories and practices of bee-keepers, rather than infelicities of expression. Mr. Root confesses he (Root) makes "slips" in writing, is thankful to have them pointed out, and thinks the appreciation would be more, and the profit as much, if they were pointed out privately.

Mr. Taylor having said that "helpful criticism is more than meat and drink" to himself, Mr. Root thinks such things out of place in a bee-paper, but since Mr. Taylor thrives on that sort of diet, he gives him some, instancing Mr. Taylor's saying "would" for "should," and "earliest" for "earlier." He thinks if Mr. T. had a late dictionary he would not object to "boil" in the phrase "bring to a boil;" thinks the crimson fluid from Mr. Taylor's sympathetic heart would not have suffused his cheeks at the use of "canine" for "dog" if he had consulted the Standard dictionary; hints that Mr. Taylor has been naming words slang that are only colloquialisms; and greatly enjoys Mr. Taylor's criticisms when confined to theories and practices of bee-keepers, but doesn't like being taken to task for opinions he doesn't hold.

We, also, enjoy reading Mr. Taylor's writings on practical bee-keeping, but fully agree with Mr. Root's idea, that criticisms of the language used by correspondents properly belong to a purely literary periodical, and not to a bee-paper. While we endeavor to have the English language used correctly in this journal, we do not hold it up as a model, or expect any reader so to regard it. Our aim is to have everything in it so plainly exprest, that even the youngest or dullest reader may understand it. Then we are certain the oldest and most learned will comprehend it all.

◆

Putting Comb Honey in Tumblers.—This matter was brought up at the Omaha convention, and Editor Root refers to it in the following paragraph from Gleanings for Oct. 1:

> During one of the discussions at Omaha, the practice of putting up broken comb honey in tumblers by bee-keepers was most severely condemned, for the reason that glucose-mixers put a little chunk of comb honey into a tumbler of glucose, and then labeled it "Pure Honey." This latter, going out into the markets, disgusted consumers, and they naturally think that, if honey tastes that way, they want no more of it. It was urged that some good bee-keepers practiced putting up broken comb honey in tumblers. But that made no difference; they should be severely scored by the bee-keepers. They could put up their broken comb honey in tin pails; but even then it was urged that they sell it around home. I think, myself, that no bee-keeper should put up his broken comb in tumblers, for the very reason that such a package is at once suggestive of glucose.

As we desire to emphasize the importance of the above suggestion, we have reproduced this paragraph. Invariably, in the Chicago market, when we find a tumbler or other glass package with a piece of comb honey in it, the liquid part is glucose, pure and simple. And it is most villainous stuff to eat. Just the smallest taste is enough to sicken us. No wonder civilized people, who purchase such a vile thing, at once decide that "if honey tastes that way they want no more of it." And then of course they fear trying again, when they are offered the purest honey. So it goes; and so it will continue to go until pure food laws are everywhere enacted and vigorously enforced.

THE WEEKLY BUDGET

Mr. J. Kerr, in the Australian Bee Bulletin, strongly maintains that bees recognize and distinguish members of their own colony from intruders by sight, and not by sense of smell as generally believed.—American Bee-Keeper.

Mr. G. G. Wickson, of the firm of G. G. Wickson & Co., of California, called on us last week. Mr. Wickson's firm deals in bee-supplies as well as goods in other lines, especially farm and dairy implements. They have stores in three cities on the Pacific Coast. Mr. W. has 150 colonies of bees in a new house-apiary made to hold 300 colonies. He is a pleasant, business-like gentleman, and evidently is "cutting a wide swath" in the lines he represents.

Dr. A. B. Mason, Secretary of the United States Bee-Keepers' Union, wrote us Oct. 11:

> "I have been so busy since I got home [from the Omaha convention] that I am behind with everything but my dental work. I have not lookt at my bees, except one colony, since a week before going to Omaha, and don't know whether they have plenty of stores or are starving. The supers are all on yet, there being so much honey-dew that I don't care if I don't get time to extract it."

Editor W. Z. Hutchinson, of the Bee-Keepers' Review, made us a very pleasant call, Tuesday, Oct. 11, when on his homeward journey from the fair at St. Louis, where he made the final exhibit for the year. He went there from the Illinois State Fair at Springfield, where he secured a number of cash premiums, as noted in these columns last week. At St. Louis he also captured a goodly lot of the premiums offered in the apiarian department of the fair. Mr. Hutchinson thought perhaps this might be his last year exhibiting at the fairs, as the Review is getting in such condition financially as not to necessitate his making the rounds of the fairs in order to win a share of the cash premiums offered. But we should regret to learn that he had ceast making his annual exhibits at the fairs, for there are very few bee-keepers in this country that can equal him in putting up a honey-show. Instead of any good exhibitor dropping out of the list, there should be more added to it, for it is an effective means of calling the public's attention to honey and its great food value.

Mr. W. K. Morrison, in Gleanings, says of Porto Rico: "It is a very fine bee-country. It is the only part of the Spanish colonies worth owning." While referring to the same country a current newspaper item reads: "A peculiarity of the island is that neither snakes nor flowers are found, as in other tropical countries.—American Bee-Keeper.

Hon. Eugene Secor, the General Manager of the United States Bee-Keepers' Union, is interested in fruit-growing as well as bee-keeping. At his late Winnebago County (Iowa) Fair, the local newspaper reported that "Mr. Secor showed 36 varieties grown on his place inside the city limits. Many of these were Russians that would give the reporter the lock-jaw to pronounce. These new candidates for public favor are only on trial and will not be recommended by Mr. Secor for general planting until they prove to be more valuable than those kinds already known and accepted."

Ye Editor and Wife had the pleasure of spending nearly a whole day—Oct. 6—with Mr. and Mrs. F. Grabbe, at their place in Libertyville, Lake Co., Ill. Mr. G., while still keeping some 30 colonies of bees, and securing about 1,000 pounds of honey the past season, has been getting into the spring and mineral water business the past year or more. He owns a spring that flows at a rate of five gallons a minute, of the purest, clearest water imaginable. It is intended to be used as a table water, for general drinking purposes. A careful chemical analysis of this water reveals unmistakable medicinal properties.

Mr. Grabbe also has connection with another spring about one mile from his own home spring, that is equal if not superior to the famous springs at West Baden, Ind. Years ago the Indians knew of this latter spring, whose life-giving water Mr. Grabbe ships all over the country, and they once used the surrounding land as a camping-ground. The water tastes strongly of sulphur, and in many cases has proven an absolute cure for consumption, kidney diseases, etc.

Mr. G. will be pleased to mail a circular describing the curative qualities of these waters to all who make application therefor.

Mr. Grabbe, some 25 years ago, owned a half interest in the American Bee Journal, with W. F. Clarke, of Canada. They soon sold their interests to Thomas G. Newman, from whom we purchast it in 1892.

Mr. N. Staininger, of Cedar Co., Iowa, wrote us as follows, Oct. 8:

Dear Friend York:—It is with very much grief that I have to tell you of the death of my oldest son, Harry. He joined the army June 21. died at Jacksonville, Oct. 5, and was sent home to us on the 8th. He was sick only about 12 days with typhoid fever, and as the telegraph wires were all down, we did not know it till they were on the way home with his body.

Yours in sorrow,
N. Staininger.

This is sad, indeed; and our sincerest sympathy is extended to our friend and family in their deep sorrow, and in this expression we feel that all our readers will unite.

Klondike Bonanza Schemes, we note, are creeping into the advertising pages of some of the bee-papers—at least one of them. We have been offered several of them, but felt that all were too "schemy" for us to touch, or admit into our advertising columns. People that expect to get rich in a hurry are just the dupes that such glittering schemes generally catch. Understand, we do not say they are frauds, but we do say that any one with even a little sense will think four times before investing. See here. Do you suppose that the rich capitalists of this country are going to be so generous as to offer a good thing to the rest of the people, or to let it get away from *them?* Not much. They are continually looking for "gold mine" investments that assure certain returns, and they are not going to let bee-keepers and others get a good thing away from them. The very fact that such "bonanzas" are advertised, look to us that they are worthless as investments, else those with large idle capital would snap them up too quickly.

BEST
EXTRACTED HONEY FOR SALE
ALL IN 60-POUND TIN CANS.

ALFALFA HONEY

This is the famous white extracted honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

BASSWOOD HONEY

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is greatly preferred by those who like a distinct flavor in their honey.

PRICES OF EITHER ALFALFA OR BASSWOOD HONEY:

A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—One 60-pound can, 7½ cents a pound; 2 cans, 7¼ cents per pound; 4 or more cans, 7 cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. This honey is all

Absolutely Pure Bees' Honey.....

the finest of their kinds produced in this country.

We would suggest that those bee-keepers who did not produce any honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. The pamphlet, "Honey as Food," will be a great help in creating customers for honey. See prices on another page.

GEORGE W. YORK & CO., - 118 Michigan St., CHICAGO, ILL.

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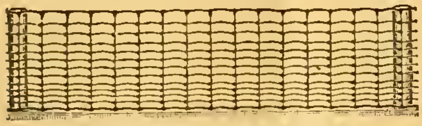
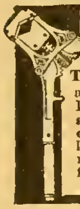


ONCE A MAN

named his horse "Congress," because, he said, "he never passes anything." Don't pass by our "ads." without asking for "Fall styles and prices."

Page Woven Wire Fence Co., Adrian, Mich.

Please mention Bee Journal when writing.



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The Quiet, Orderly, Gentle and Safe animal is the one that has been dehorned. It means animal comfort and that means animal profit. This knife cuts clean, no crushing or bruising. It is quick, causes least pain. Strong and lasting. Fully warranted. Highest awards World's Fair. Send for free circulars and prices before buying.
A. C. BROSIUS, Cochranville, Pa.

38-6t Please mention the Bee Journal.

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Sample copy FREE to ANY ADDRESS upon receipt of name and address plainly written on postal card naming paper in which you saw this ad. Address
AGRICULTURAL EPITOMIST, Indianapolis, Indiana.

26E26t Please mention the Bee Journal.

DON'T SWEAR as you did last season that you will buy an Incubator and then not do it. Nothing like starting right. If you want to start right and stay right buy the

Reliable Incubator.

Made so the veriest novice can't fail with it. Light the lamp, the Reliable does the rest. We send a 224 page book for 10c in stamps that tells all about it and the Reliable Poultry Farm.
RELIABLE INCB. & BROODER CO. Box B 2, Quincy, Ill.

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WANTED To Buy for Cash—a few lots of No. 1 white **Comb Honey.** State shape it is in and price wanted. **H. G. QUIRIN, Bellevue, Ohio.** 41A6t

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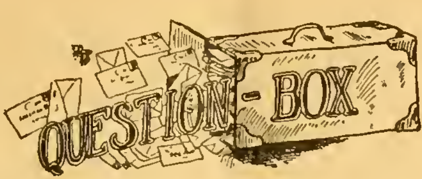

In the multitude of counsellors there is safety.—Prov. 11-14.

Casing Comb Honey for Market.

Query 83.—In casing comb honey for shipment to market, what would be your rule as to the row of sections next to the glass?—N. Y.

R. C. Aikin—A fair sample of the whole case.

E. France—The same as the case would average.

D. W. Heise—A fair sample of the contents of the entire case.

Chas. Dadant & Son—Let it be a fully fair average of the contents.

Prof. A. J. Cook—They should never mislead as to grade of honey.

A. F. Brown—Just an average sample of what the whole case contains.

Emerson T. Abbott—They should represent the grade of honey in the case.

C. H. Dibbern—Use the whitest and best, but the inner rows should be very nearly equal to it.

Rev. M. Mahin—I would put in sections that would fairly represent the average of the lot.

Eugene Secor—I put nice ones next the glass, but all honey in the case to be of the same grade.

G. M. Doolittle—That they be as good as the average of those in the case, then turn "face" side out.

O. O. Poppleton—What is the object of having sections show at all, if they are not fair samples of what the case contains?

Mrs. L. Harrison—I would have the row next the glass a fair sample of the interior. Wouldn't you, if you were the purchaser?

Dr. C. C. Miller—They should be a fair average of all the sections in the case, and the best side of each section should be next the glass.

W. G. Larrabee—I put all of my honey in cartons, but if I were to put it in glass I would put just as good sections next to the glass as are in the case.

Dr. J. P. H. Brown—Place the best next to the glass, taking care to have all the rest of the same quality. Place the bad, if any, in a case by themselves.

E. S. Lovesy—For color and quality our honey has the reputation of being first-class. In filling shipping-cases we aim to avoid facing, and fill up with a fair average.

R. L. Taylor—I should put fine looking ones next the glass on the same principle that I would use a clean, nice looking box to put the honey in. Of course, the other sections should be of the same grade.

J. A. Green—My honey is first carefully graded. Then out of sections enough to fill a case, I select three or four, as the case may be, that are smooth and uniform in appearance to place next the glass. Very often there are nicer sections back of them, and I

Sweet ❦ Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Sweet Clover	.60	$1.00	$2.25	$4.00
Alsike Clover........	.70	1.25	3.00	5.75
White Clover..........	.80	1.40	3.00	5.00
Alfalfa Clover........	.60	1.00	2.25	4.00
Crimson Clover.......	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, wanted by freight.

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If you want Colorado Alfalfa, Sweet Clover and Cleome honey—comb or extracted—correspond with the Secretary of the Colorado State Bee-Keepers' Association. Our Honey ranks high in quality. Car lots a specialty.

Address **F. RAUCHFUSS, Elyria, Colo.**
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am always careful to avoid having the front combs distinctly superior to the rest. I do not consider that it makes any difference how or by whom the honey is sold.

J. E. Pond—My rule would be to case all honey as nearly alike as possible. Of course, the best is to be expected to show, but, like apples, we don't want a few good ones on top, and the rest all small. Case honey honestly, and thus get up a reputation.

G. W. Demaree—I presume you mean to ask how I case comb honey for market. As a general thing some sections will be a little plumper than others—in casing I place them so that there will be an air-space between the combs, and I select sections with straight surface to go next to the glass to insure air-space between the combs and the glass, because it secures the combs from the effects of possible moisture by being set back from the glass, and makes the case look at its best. The fronting sections are no better in quality than the average, and often they are lighter in weight than some of the rest.

P. H. Elwood—Our honey is separated into grades exactly as the 'Albany grading called for. Then the most attractive face is usually put out. Where there are yellow cappings, occasionally a yellow face is put out. A thick, smooth capping is best outside; a thin, rough capping looks darker than the honey really is. When a buyer finds a case of honey of exactly the grade he bought, he has no reason for complaint, even if the most attractive face is put out, and as it is impossible to pack honey so as to have the face show the exact quality (the darkest buckwheat often having a very white capping), the buyer, unless acquainted with the brand, usually opens up a few cases before making his purchase.

GENERAL ITEMS

Bees Did Well.

My bees have done very well for this season. I think I will get over 1,000 pounds of comb honey. I had 8 colonies, spring count, and increast to 15. The last swarm issued Aug. 16. I gave them full sheets of foundation, put them on the old stand, and gave them two supers of 24 sections each; they have filled 72 sections. The old colony has filled 24 sections, and they are both in good condition for winter, so I think the experiment workt all right. I have not taken all the honey off yet. C. W. HARRIS.

Pawnee Co., Nebr., Oct. 10.

His First Summer's Experience.

This is my first summer's experience with bees, and I am greatly interested in them. I started with four colonies in box-hives, and had four swarms from them. I transferred two colonies to frame hives with complete success. I harvested about 100 pounds of honey this summer. I intend to get my bees all into up-to-date hives, and next summer I want to run them on modern methods. There are only a few bee-keepers in this county, and nearly all are on the old

The Bee-Keeper's Guide

This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published today. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."

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The following offer is made to PRESENT subscribers only, and no premium is also given to the two new subscribers—simply the Bee Journal for one year:

Send us **Two New Subscribers** to the Bee Journal (with $2.00), and we will mail YOU a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both together for only $1.75. But surely anybody can get only 2 new subscribers to the Bee Journal for a year, and thus get the boo as a premium. Let everybody try for it' Will you have one?

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They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

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Address, **Leahy Manufacturing Company,** Higginsville, Mo., or 1730 South 13th St., Omaha, Neb.

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☞ **See Honey Offer on page 666.**

plan. I think that bee-keeping could be made profitable here if managed rightly. Honey of any quality and in almost any shape sold here for 15 cents per pound the past summer. I want to learn all I can of the business, and aim to see what there is in it here. WILL C. GRUBER.

Martin Co., Ind., Oct. 7.

Fine Flow from Goldenrod.

Bees wintered very poorly in this section last winter. I started in last fall with six colonies, came out in the spring with only three, and one of those very weak. Apple and other fruit-bloom was a total failure here, being rainy for nine days. White clover was plentiful and yielded a small amount of nectar, from which bees gathered enough to live on till Aug. 20; from July 12 till Aug. 20 there was no honey at all—no surplus up to that time. Since Aug. 20 there has been a fine flow from goldenrod and wild asters. All three colonies cast swarms about July 1. Oct. 1st I took off 100 pounds of fall honey, well filled and in fine shape. The hives are well filled, almost to the last cell. W. D. BUELL.

Litchfield Co., Conn., Oct. 3.

Report for the Past Season.

I started last spring with 65 colonies; five of them didn't breed up well, so I gave them new swarms, but not soon enough to do much. I increast to 77 colonies, and took 2,270 pounds of comb honey, about 1,500 pounds of which was basswood and clover, the balance buckwheat, and 300 pounds of extracted. I introduced 12 young queens last week. My bees are all in good condition for winter. G. W. BELL.

Clearfield Co., Pa., Oct. 10.

Not so Well as Last Year.

Last week's American Bee Journal I failed to get. This, I think, is the first time I did not get it regularly on Thursday in three years, and I can't afford to lose a single copy, for I get a great deal of information out of it. I save every number and get them bound, which makes a valuable addition to any bee-library.

My bees have not done as well this year as last, and what honey there was is not as nice, as it is quite dark. I have 50 colonies which are all in good condition for winter. R. RODENBERGER.

Waukesha Co., Wis., Oct. 11.

Wants to Know Frame and Country.

About the "Notre Dame hive"—well, if Mr. Chrysostom had given the size of frame of the hive he describes on page 629, and if the country in which he, the inventor, resides and keeps bees had been given, what he claims for his hive would be much more comprehensible to us. For example: Should he use a half-depth Langstroth frame, or one still smaller, there would be nothing remarkable in his colonies being on 40 frames by July 1; but should he use a frame even not much larger than the Langstroth frame, a colony occupying 40 frames by July 1 would be incredible. Why, what might we expect by Sept. 1? The bees perhaps would be on 100 or more frames, to judge from what we do here. In a country like Cuba or California it may be nothing wonderful—yes, a thing to be expected—to find colonies occupying 40 Langstroth frames by July 1.

Don't you see, Mr. Chrysostom's article would have been clearer if frame and country had been given. F. GREINER.

Ontario Co., N. Y.

[Well, Mr. Greiner, we don't know anything about the size of frame Mr. Chrysostom uses in his new hive, but we can say that he lives in St. Joseph Co., Indiana.

Another correspondent, referring to the same hive, has this to say:—EDITOR].

That hive on page 629, that "will, in all probability, supersede all our loose-hanging frame hives," I venture to say is one that you could not get practical bee-keepers to take as a gift. A man that will write about close-fitting frames combining the safe qualities of a box-hive for safe wintering, and all the facilities of the loose-hanging frame for easy and safe handling, can hardly be worthy of much notice."

A Report from New Hampshire.

Our spring crop was hardly an average one, white clover failing prematurely on account of the drouth. As a consequence, we had less swarms than usual. This fall we had a good flow from goldenrod. I think all my colonies have sufficient stores for winter without feeding. J. P. SMITH.

Sullivan Co., N. H., Oct. 8.

About the Phacelia.

In reply to the question askt on page 630, I can say there are two kinds: Phacelia congesta, growing in Texas; and phacelia lancetifolia, growing in California (1½ feet high). The seed can be had from Carl Pabst, Erfurt, Germany. JOS. KUHLES.

McHenry Co., Ill., Sept. 12.

Victory for the National Union.

Mr. J. C. Kubias, of Redlands, Calif., has been sued by Mr. W. F. Whittier for damages, and he prays for an injunction restraining Mr. Kubias from keeping bees within one mile of his land, claiming that the bees befoul the water used for irrigating and domestic purposes, and also sting men who work in the fields adjoining the apiary. Mr. Kubias' apiary was located there before Mr. Whittier planted his orchard, and should have prior right to the location—if there is to be any preference.

The National Bee-Keepers' Union assisted the defendant with "points of law" and money to help defray the expenses of a lawsuit. When it was known that the Union was interested in the defense, the plaintiffs weakened and bought out the defendant's homestead. Mr. Kubias returned the money to the Union and wrote thus:

> "Whittier acknowledges, through his attorneys, the correctness of our position and bought my rights to the homestead entry on which my bees are located. The fact that the National Bee-Keepers' Union was back of me was the most potent factor in not allowing the case to come to trial.—J. C. KUBIAS."

As soon as the enemies of the pursuit of bee-keeping understand that the National Bee-Keepers' Union is interested in the defense, they generally waste no time in

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by our perfected method of giving lessons by mail. Easiest, simplest system. Send stamp for particulars.

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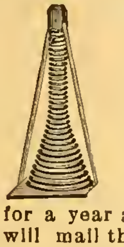

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The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

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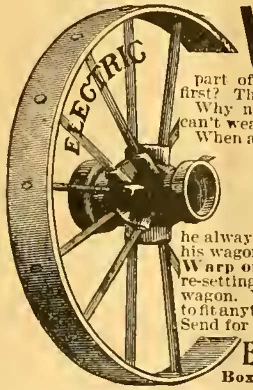

WHAT part of a wagon wears out first? The wheels, of course. Why not buy wheels that can't wear out? When a man buys the

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he always has good wheels on his wagon. They can't Rot, Warp or become Loose; no re-setting of tires; they fit any wagon. We also make wheels to fit anything wearing wheels Send for circulars and prices.

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This Emerson stiff-cloth-board Binder for the American Bee Journal we mail for 60 cents; or will send it with the Journal for one year—both for $1.60. It is a very fine thing to preserve the copies of the Bee Journal as fast as they are received. If you have the "Emerson," no further binding is necessary.

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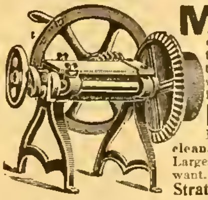

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Made with or without gear. Cut clean, fine and easy. Can't be choked. Largest line made. Ask for what you want. Catalogue and prices free.

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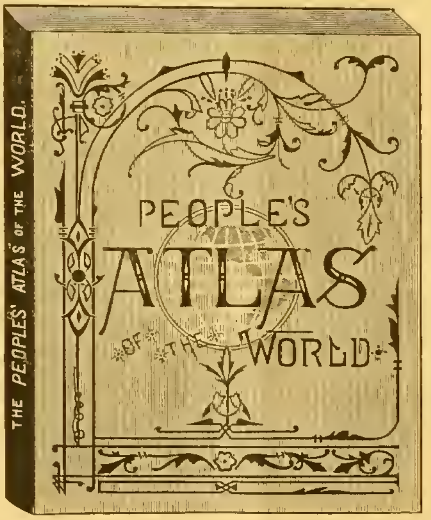
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either trying to settle the matter by compromise or letting it drop entirely. This shows the value of organization, in maintaining their rights and demanding their privileges. "In Union there is strength." Bee-keepers should remember this, and lose no time in becoming members of the National Bee-Keepers' Union.

THOMAS G. NEWMAN,
San Francisco, Calif. Gen'l Manager.

Blest with a Good Season.

We have been blest with another good season in this part of the country, and bees are in good condition to winter well.

JOHN UPHOUSE.
Skagit Co., Wash., Oct. 4.

Bees Did Nothing.

Bees have done nothing here this season. I have to feed mine. But we must not lose heart. We hope to have better times next year. J. LAIDLAW.

Ontario, Canada, Oct. 6.

Member of the Mint Family.

I enclose a sprig of a weed that is growing in my yard. It commences blooming Sept. 1, and is still blooming. My bees have been working on it almost incessantly since it commenced blooming. Is it anything of a honey-plant? What is its common or botanical name? Any information will be gladly received, for I am thinking of propagating the plant next spring.

H. H. BIGGERSTAFF.
Cleveland Co., N. C.

[The plant sent by Mr. Biggerstaff is a member of the mint family, to which belong a large number of valuable honey-plants. The one sent is probably a collinsonia or horse-balm, but it is so small and fragmentary that actual determination of the species is almost impossible. If Mr. B. will send me a larger specimen, with color and size of flowers noted, I can tell him the exact name. Nearly all of this great family are fine honey-yielders, and doubtless the one in question is, and well worth a trial in cultivation.—H. S. PEPOON, Botanist].

Convention Notices.

Connecticut.—The fall meeting of the Connecticut Bee-Keepers' Association will be held at the Capitol at Hartford, Wednesday, Nov. 2, 1898, commencing at 10:30 a. m. Every member should make an extra effort to be present at this meeting.

Waterbury, Conn. MRS. W. E. RILEY, Sec.

Minnesota.—There will be held the annual meeting of the Southern Minnesota Bee-Keepers' Association at Winona, in the Court House, in the County Commissioner's Room, Thursday and Friday, Oct. 20 and 21, 1898.

Winona, Minn. CHAS. A. GILE, Sec.

Illinois.—The Illinois State Bee-Keepers' Association will hold its 8th annual meeting at the State House in Springfield Nov. 16 and 17, 1898. We will have the advantage of one fare and a third for the round trip—open rate—along with the Odd Fellows whose meeting is the third Tuesday of November. Our Association has been petitioned by the Northern Illinois Bee Keepers' Association to take the proper steps to secure the same foul brood law for our state as that of Wisconsin. Other matters of importance will come before the meeting, and we expect to have the usual good time that bee keepers always have when they get together. Excellent board is secured at 25 cents per meal and lodgings just as reasonable. All bee keepers are invited. The one dollar for membership fee also entitles you to the American Bee Journal for one year.

Bradfordton, Ill. JAS. A. STONE, Sec.

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Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, $1.00.

Langstroth on the Honey-Bee, revised by Dadant—This classic in bee-culture, has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages; bound in cloth.

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Bee-Keepers' Guide, or Manual of the Apiary, by Prof A. J Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages; bound in cloth and fully illustrated.

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Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of Queen-Bees are reared in perfect accord with Nature's way 176 pages, bound in cloth, and illustrated. Price, $1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopædia of 400 pages, describing everything pertaining to the care of the honey-bees It contains 300 engravings. It was written especially for beginners Bound in cloth. Price, $1.25.

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The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only ONE book can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted see postpaid prices given with the description of the books on this page Following is the clubbing-list:

1.	Langstroth on the Honey-Bee	$2.00
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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Oct. 7.—Fancy white clover brings 13c, with best grades of white comb about 12c; off grades with more or less empty cells, 10 to 11c; ambers, 8 to 9c, according to grade, with fancy at 10c. Extracted, white, 6 to 7c; ambers, 5 to 6c; dark, 4½ to 5c. Beeswax, 26 to 27c. R. A. BURNETT & CO.

San Francisco, Sept. 28.—White comb, 9 to 9½c; amber, 7 to 8½c. Extracted, white, 6½@6¾c.; light amber, 5½ to 6c. Beeswax, 24@27c

There were large shipments this week of extracted honey by sea, one ship taking 787 cases for New York and another carrying 535 cases for London. The entire crop this season of both extracted and comb will likely not exceed 12 000 cases. Market is firm at the quotations, more especially so for choice extracted which is relatively lighter supply than comb.

St. Louis, Sept. 9.—Fancy white comb, 12 to 12½c.; A No. 1 white, 10 to 11c; No. 1 white, 9 to 10c.; dark and partially filled from 5 to 8c, as to quality. Extracted in cases, No. 1 white, 6 to 6½c; No. 2, 5½c; amber, 5c; in barrels, No. 1 white, 5½c; amber, 4½ to 5c; dark, 4 to 4½c. Choice Beeswax, prime, 24c; choice, 24½c. At present there is a good demand for honey. WESTCOTT COM. CO.

Kansas City, Sept. 9.—Fancy white comb, 12@13c; No. 1, 11@12c, amber, 10@11c. Extracted, white, 5½@6c; amber, 5@5½c; dark, 4½@5c. Beeswax 22@25c.

The receipts of comb honey are larger.
C. C. CLEMONS & CO.

Boston, Sept. 30.—Our honey market shows a decided firmer tone since our last. A few sales have been made at 15c for an extra fancy lot, while almost all sales ranging from A No 1 to fancy now are made at 14c, while occasionally, something a little off, will bring as low as 12½ to 13c. We do not look to see any lower prices.

Extracted, Florida, in barrels, mostly 6c to 7c, with a good demand. Beeswax, slow sale at 26c for best. BLAKE, SCOTT & LEE.

Indianapolis, Oct. 3.—Fancy white comb honey, 12 to 12½c; No 1, 10 to 11c. Demand fairly good. Tar-colored comb honey, 8 to 9c, with almost no demand Clover and basswood extracted honey, 6½ to 7c Beeswax, 25 to 27c.
WALTER S. POUDER.

Milwaukee, Sept. 20.—Fancy comb, 12 to 12½c; A No. 1, 11 to 12c; No 1, 10 to 11c; dark and amber, 8 to 10c Extracted, in barrels and kegs, white, 5½ to 6c; dark, 5 to 5½c. Beeswax, 25 to 26c.

The condition of this market for honey is favorable for shippers of good quality either in comb or extracted, and the receipts, while they are with us very fair, are not as liberal as may be, while the demand is very fair at our quotations We advise liberal shipments of 1-pound sections and extracted.
A. V. BISHOP & CO.

Buffalo, Sept. 16.—There is quite an improved demand for honey at present, and moderate amounts can be sold of strictly fancy 1 pound comb at 11 to 12c; lower grades range from 10c downward. We advise but moderate shipments for awhile yet. Extracted—average grades could be sold at 4 to 5c. Fancy beeswax, 27 to 28c; common, 20 to 25c. BATTERSON & CO.

Columbus, Ohio, Oct. 12.—Fancy white comb, 14 to 15c; No. 1 white, 12 to 13c; No 2 white, 10 to 11c; amber, 9 to 11c. Extracted, 5½ to 7c
COLUMBUS COM. AND STORAGE CO.

New York, Sept. 26.—Comb honey continues to arrive freely. Demand is good for nearly all grades at following prices; Fancy white, 14c; No. 1, 12c; amber, 10c; buckwheat, 8 to 9c; an exceptional quality at 9½c. There is a good demand for extracted, all kinds, at 6½c for white, and 5½c for light amber in cans; Southern, in barrels, 55 to 58c a gallon. Beeswax dull at 26c.
HILDRETH BROS. & SEGELKEN.

Cleveland, Sept. 1.—Fancy white, 13@14c; No. 1, white, 12@12½c; light amber, 11c; buckwheat, 9c. Extracted, white, 7c.; light amber, 6c

The demand for honey is exceptionally good, owing to the crop in this vicinity being very light. A. B. WILLIAMS & CO.

Detroit, Sept. 24.—Fancy white, 11@12c; A No. 1, 10@11c; No. 1, 10c; fancy dark or amber, 9@10c; other grades, 8@9c. Extracted, white, 6@6½c; dark or amber, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

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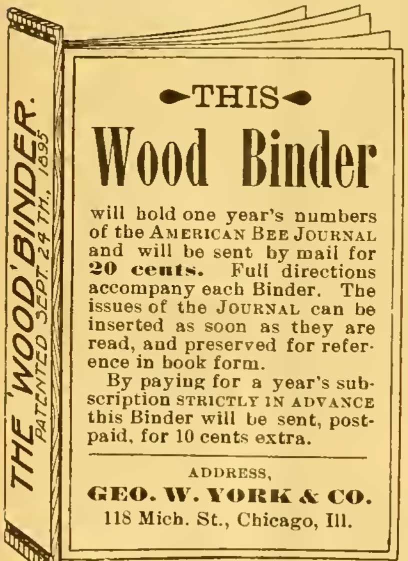

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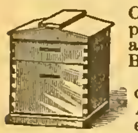

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38th Year. CHICAGO, ILL., OCTOBER 27, 1898. No. 43.

CONVENTION PROCEEDINGS

UNITED STATES BEE-KEEPERS' UNION.

Report of the 29th Annual Convention Held at Omaha, Nebr., Sept. 13-15, 1898.

DR. A. B. MASON, SEC.

[Continued from page 661.]

FIRST DAY—AFTERNOON SESSION.

WHITE OR CREAM-COLORED SECTIONS—WHICH ?

"Is it better to use white or cream-colored sections, or does it make any difference which you use ?"

Mr. Masters—I believe that in my market I can sell comb honey in white sections for one cent more per section than in cream-colored sections. I have tried it time and again. In the cream-colored sections it doesn't sell well.

Mr. Lathrop—I have tried both, and I find that the material in the cream-colored sections is very much poorer than that in the white sections. There is more breakage in the cream-colored. I do not use them either for myself or for my customers. I buy nothing but the snow-white, and I feel better satisfied.

Mr. Scott—I have sold more or less honey with both white and cream-colored sections to the merchants in Chicago, Omaha and Kansas City, and I do not know that there is any difference. We have made no difference.

Mr. Danzenbaker—I have recommended in my book the best sections, No. 1. I think if the honey I was getting was dark I would use dark sections, but if I produced white honey I believe I would like white sections.

Mr. Rauchfuss—The past season we sold about 100,000 No. 2 sections, and pretty nearly every one of the bee-keepers who bought them because they were forced to buy them would come back and say they wouldn't take any more at any price. We have concluded that next year we will not sell them. The dark sections don't show off the honey so well.

Mr. Danzenbaker—That remark has paid me for coming here. I was almost ready to recommend that for home use or for dark honey they might use No. 2 sections. For my own use I always feel that No. 1 is the thing. I guess I will let it stand.

Dr. Miller—I do not feel that we have had any topic before us as good as this. It has been one of the questions in my mind that I wanted to have settled. I have not used anything but the white sections, but I have felt uneasy and have had an idea of trying the cream-colored. Some say that dark honey in white sections is made to look darker by the contrast; but oughtn't that to be an argument the other way, too ? If I put white honey into white sections, the white wood is whiter than the white honey. The testimony of those who have tried the cream-colored will not try them again shows me that it is perhaps a wise thing for me to make no experiments. I hope if there are any more here who have used both they will give the results of their experience.

Mr. Miles—I have used some of both kinds, not altogether because I desired to experiment, but I happened to get some No. 2. I think white honey in white sections looks most attractive; but the main saving to me would be in the fact that there is better wood in the white sections. In the cream-colored you lose so many sections.

Dr. Miller—You pay a lower price for the cream-colored.

Mr. Miles—That would not make up the difference. I do not like to bother with them unless it would pay. It is the inferior wood in the cream sections. The white wood is from the young, sound trees. I think the looks of cream sections is a good deal like having bee-glue on the sections. If the cream sections make the honey look whiter and more attractive I should think the bee-glue would, too; but we know it would not.

Dr. Miller—There is a point in favor of the cream sections—they do not show the bee-glue as bad as the white ones do.

Mr. Cameron—I bought a few as an experiment. I didn't know what they were. They ought to have been thrown away by the manufacturers. They were very bad. If you simply opened the box they would fall apart. If all cream sections were like those, I wouldn't take them as a gift.

E. R. Root—It doesn't make any difference to the manufacturer which kind are sold. The cream-colored sections are cream-colored because the wood is dried in the summer time. The white wood is dried in cold weather. If the logs are cut in the summer time and sawn into planks, they would be almost invariably dark or cream-colored. There are two classes of cream-colored sections; there are some that are defective in the wood, and there are some that are made of good sound wood. You can tell when you have a strong, sound section by looking at the edges of the V cut. In the poor wood this cut will have its edges ragged and more or less torn. If

Miles Morton.—See page 679.

the V cut is nice and clean and good, you can make up your mind that the wood is tough.

A. I. Root—"Seconds" are a little different from the cream-colored sections. If we have a lot of sections that are of faulty wood, or don't work up as they ought to, we say they will have to go into the "seconds." If there happens to be a knotty place in the wood, or the wood is faulty, they have to be sorted out and are called "seconds." That kind of seconds should close up as well as "firsts." The kind that is made from lumber that is not sound should be "second" and not cream. We throw into the "seconds" those that show some fault in the lumber or workmanship. In the past season we were unable to fill orders for "firsts," and we got some of the other manufacturers to help us out. I do not remember where we got some of the sections; but in some cases we paid for "firsts" and they did not give satisfaction, and the suggestion was made that we throw them into the "seconds." We are going to try hard another season so that we won't have to do that.

Mr. Terry—I use sections for my honey almost entirely, and a few years ago I could not get the white sections, and had to take the cream-colored. I found them so poor that I have not bought any since, and I wouldn't advise any man to buy cream sections. Nobody could give them to me, if I could buy snow-white sections.

FLAVORS OF HONEY—WILLOW-HERB.

Mrs. H. G. Acklin—We were talking about the different flavors of honey this morning, and I was going to speak of the willow-herb. I think it is as mild a flavored honey as you can find. Willow-herb honey is almost water-white, and I do not think there is any time in the year when it is gathered that it is strong. It really is a fall plant. It does not commence blossoming until after the first of July. The honey-flow from it is very great—almost as much as basswood.

Mr. Stilson—This morning, when we were discussing the different flavors of honey, there was a request that I should get different samples of honey from the exhibit at the Exposition. I have brought 13 samples, which are numbered consecutively from 1 to 13, and whenever the tasting or guessing committee has got through with the samples we would like to have their report on the various kinds that are there represented.

Mr. Masters—I would like to ask a question in reference to this willow-herb. I do not know anything about it. If it is a good honey-plant I want to find out about it.

Dr. Miller—That question can be answered pretty well here. It is a weed that grows in places that have been burnt off—fireweed, it is also called—and, as a rule, you will not find it growing elsewhere. It is not worth while to get the seed of the plant, as it will not flourish unless you have a timbered place that has been burnt off. Don't fool away your time trying to cultivate the willow-herb. It flourishes only on the burnt districts. In regard to these samples of honey, I confess I do not believe I could be sure about them. Cleome and alfalfa are there, but I do not believe I could tell the difference. If you want a committee to examine them and test them it will be of service to us if they will do that soon, and then let us have these samples identified so that we can learn something about them. I have very little knowledge about these different kinds of honey.

Dr. Mason—Does the willow-herb grow more than one year on the same ground?

Dr. Miller—I think it does; but after a time that ground will not produce the willow-herb. It does not grow continuously. It grows only for a time on the burnt districts.

Mr. Danzenbaker—In Michigan there are hundreds of thousands of acres that have been burnt off where the plant grows. The seed ripens in August and comes up in September, and next year it blooms. It begins about the first of July to produce honey, and it will keep on until frost. It grows from the seed, but it takes two years to bloom and produce honey.

Mrs. Acklin—I think Mr. Danzenbaker has about covered the ground. I was going to say that it does not last on the same land more than five or six years. Last year, on certain land that had borne it before, there was only about half a crop, and this year none at all. It begins to blossom at the bottom of the stalk, and will continue to blossom from there toward the top until the bottom has gone to seed. I certainly think it is the finest honey there is produced. Of course, the same plant does not grow for five or six years; I mean that the same land will produce it for that same length of time by re-seeding.

ADULTERATION OF HONEY—DETECTING IT, ETC.

Mr. Rauchfuss—In regard to this question of adulteration I would say that in our State we have a law in regard to adulteration of syrups and honey. It is not carried out, but that is no fault of ours because we haven't got the necessary capital to go after them. A certain packing company complies with the law in our State; that is, they will put a small label on saying that it is 80 percent corn syrup and 20 percent clover honey. That is the way they put it on the market and we can't touch them. They have a label which says "Honey Compound" in large letters.

Dr. Mason—We have the same thing for sale in Toledo, and it is labeled the same way. They comply with the law, and we can't touch them.

Mr. Rauchfuss—Several years ago we had a tasting committee at our convention. Prof. Gillett, from the Agricultural College, brought some samples of honey markt with the numbers, and with a little glass rod in each for sampling it. Then he gave us printed slips with the numbers on, and after the numbers there was a blank space for us to fill out the name. The blanks were handed to the president to report. It was something very instructive, and it should be carried out here if it is possible.

Mr. Stilson—In regard to adulterated honey that has been placed on the market in this city and State, there was one firm here in the city that was putting up two grades of glucose. One was put up in glasses and was markt "California Honey." It didn't show a bit of honey in it; it was absolutely pure glucose. The other grade, put up by the same firm, had a piece of comb honey in it, and was markt "Pure California Honey," and it was one part honey and five parts glucose, but a better grade of glucose than the first was. We had some cases that we thought we could make stick here, and we were expecting to try to prosecute him for obtaining money under false pretenses; but before the case was brought before the courts the man who was doing the adulterating went to the other world, and we haven't got his address, and are afraid the sheriff couldn't find him to serve him with process, and so the proceedings have been dropt. In our institute work the people have been pretty thoroughly workt up on the matter of adulterations. The way most customary has been to go into the groceries in the different towns. We go into a grocery and buy the articles there, and if we can get the merchants to wrap up the packages which we buy in a parcel markt with their grocery firm name, so that they cannot dispute its being purchast in their town, and then hold the package up to the audience at the proper time and show them the articles we have purchast in their town, and give the manner of adulterating; it works well. Last winter at one time in one of the meetings there was a man got up and undertook to deny that there was anything of the kind sold in their town, and I reacht back and pickt up two samples I had lying on the table, wrapt up in a grocer's paper, and come to find out the grocer was the man who had got up in the back part of the room and denied the sale of the adulterated article. Pretty quick a man jumpt up in the back part of the room and said, "Mr. Chairman, I know that is correct; I have done the mixing," and he gave the formula by which it was prepared.

E. R. Root—There are three ways of detecting when honey is adulterated with glucose. One way is to take what you know to be glucose and taste it—take enough until you get sick. From that time on I believe it can be detected every time. That sample of glucose there on the table has a brassy taste, and you can recognize it every time; I don't care how much honey you put with it. Mr. York sent me a sample a few years ago that didn't have that brassy taste. It was nice in color, thick in body, but vile in flavor. Another way to make the test is to mix the sample with alcohol and stir it up; if it gets cloudy in 15 or 20 minutes it is glucose. Mix the sample and alcohol about half and half. Mr. Whitcomb has got a simpler test than any I have heard of yet.

Mr. Whitcomb—Glucose will turn tea black at once; honey won't.

Isaac E. Pierce—I should like to ask Mr. Whitcomb if all grades of tea will do that?

Mr. Whitcomb—All tea contains tannin; it is the tannin in the tea acting on the glucose that turns it black.

E. R. Root—Some years ago the president of a glucose factory wrote me in regard to adulterating honey with glucose. Of course, I encouraged him all I could, to find out all I could about it. He sent me some samples, one of which was very nice to eat; it was pleasant, and had none of that brassy taste. But he said they could not furnish that unless we paid a price away above the price of honey—out of the question. The grades that could be bought for three or four cents a pound were very poor indeed—vile stuff. All glucose that is used for adulterating honey has more or less of chemicals left in it—sulphuric acid—and this test in tea shows the presence of the acid in the glucose. If you could get a chemically pure article of glucose I don't know that it would be particularly harmful for food. It reminds me of the gum that comes off of the peach-tree; it is rich, and perhaps to a certain extent nutritious. The way the factories are run now there is no method of producing a low-priced glucose that is fit for food. It is a cheat and a swindle, and a danger to human health and human life. Prof. Cook once said there was no legitimate use for the product of the glucose factory—that it was only used to swindle.

Mr. Stilson—I would like to say one word in regard to the tests. I saw a test made at our State University a couple of years ago upon some samples that I took there for analysis. The professor took a glass and poured the glucose into it and then mixt it with alcohol. Whether he mixt anything else with it I can't say. He stirred it up for about half its depth until it became milky, leaving the lower part without stirring, and then poured more alcohol on top, and in a few minutes it began to turn as if there was a cyclone in it. When it began to settle and clear that milky part didn't settle. It simply showed a fermentation. Whether there was anything else mixt with the alcohol or not I have forgotten.

E. R. Root—Pure alcohol will do that. Alcohol won't touch pure honey at all.

Mr. Danzenbaker—There is a good deal of glucose sold as "Silver Drip." I noticed in a family where I was once that the children preferred Porto Rico molasses; when they wanted molasses they would ask for black molasses. Any one who would eat that "Silver Drip" for a week would have his taste for honey destroyed; I don't believe he would ever want any honey. The greatest harm that comes to the honey-producer from it is that it weans people away from pure honey. They think they have been using honey, and never want to buy any more of it.

T. R. DeLong (Nebr.)—I would like to give an experience that I had about 20 years ago with glucose. I live in the southwestern part of this State, and I think it was the first glucose brought into that part of the country. I bought a jug of it and took it home and kept it a few days when it turned thick. I thought it was equal to about two gallons of fine molasses, and that I would just reduce it and make about two gallons of it. In a few minutes, oh, my! what a smell there was there! A horrible smell. It turned everything black. I couldn't eat it at all. I am naturally a honey-eater, so it never destroyed the taste of honey for me. I have tried glucose in tea, and coffee, and water, and it will spoil anything you put it into. It is no trouble to test glucose in water, or tea, or coffee.

Dr. Mason—I move that a committee of three be appointed to test the samples that have been produced, and report upon them and upon all exhibits, to the convention as soon as possible.

The motion was seconded and carried. Messrs. Stilson, Secor and Whitcomb were named as the members of said committee.

TOOL FOR MOVING FRAMES, SUPERS, ETC.

"What is the best tool for moving frames, raising supers, etc.?"

Mr. Whitcomb—Dynamite. [Laughter.]

Dr. Mason—This tool that I have here (exhibiting an implement of steel made somewhat in the form of a stovelid-lifter, but with a broad, chisel-like blade in front) I have had for 30 years. I can raise the corner of a house with it—if the house is not too heavy. It is also good for cleaning the frames and supers of burr-combs.

Dr. Miller—One point—or rather two points—against that tool are the two sharp corners in front. When you are thrusting it in to raise a super, the two sharp corners will cut into the wood. If the corners were rounding they would not cut into the wood at all. I am inclined to believe that the best tool for raising a super is not the best tool for moving the frames; because the tool for raising the super should be rather sharp, while the tool for raising the frame should not be sharp. I would like an implement with a blade something like this of the Doctor's at one end, and the other end arranged with a tool for moving the frames. I don't know what that will be. I believe that is a thing that bee-keepers should talk over. I have been using a screw-driver, but I believe it is a very poor tool. When we have used a real good tool we will wonder that we were satisfied so long with using a screw-driver. Mr. E. R. Root has been getting several sample tools, and Mr. York has had one or two samples. Perhaps out of the lot we may strike something that will be all right.

Dr. Mason—I do not want an instrument with a tool at each end. You can't work with it satisfactorily, having to use one end and then the other, taking hold of the soiled and sticky end when it is reverst. Nor do I like the corners round. I made one of the corners round and then I unmade it.

Dr. Miller—I find difficulty with sharp corners marring the wood. But let us be careful not try to get one tool to do too much. I doubt whether one tool can do all those things, but by using opposite ends of the tool we may get one that will work all right. In using a tool with sharp corners for moving frames, the sharp corners will sometimes mar the wood.

E. R. Root—I have been experimenting with a number of different tools, mostly of this character, but there was no crook or bend in the handle. I see a very good reason for that crook now; when cleaning frames it would be very handy. For my purpose I wanted a tool with rounded corners; the square edge left a mark on the supers. Then I think I would want a double-ended tool. One end may be used in prying apart the frames. Sometimes in pulling out a frame you will pull out the division-board. Having started the frame once you can reach down and pull it out. That tool strikes me as being very nearly all right, except that I would have rounded corners, and on the other end a little hook. That seems to be as nearly perfect as anything.

Dr. Mason—When I cannot get hold of the frames readily I just drop that tool under the end of the frame, and then I can get hold of it without any trouble. I would not take all the tools I have seen for this one.

Mr. Danzenbaker—I have used a steel scraper, such as paper-hangers use, for cleaning frames. I have a mason's plastering-trowel, squared at both ends. The metal protects the hands. It is a good cleaning tool. I use a screw-driver for separating the frames and pushing them up.

Dr. Miller—The best tool I ever found for raising frames I sent to Mr. Root; it is nothing more nor less than a common stove-lifter. It has a curve in it, and when it is put under the frames for prying the end will come against the side of the top-bar. In using it the curved part stays against the part of the frame that you use as a fulcrum, and it will move the frame easily. It has a round edge about one-eighth of an inch thick at the end, perfectly round, so it will not mar the wood. It would be of no use for separating or raising the supers, or anything of that kind; it has no sharp edge to it. With the same motion of the hand it will move the frame much farther away from its neighbor than a straight tool would. If you will get a tool with that stove-lifter at one end and the chisel-blade at the other end, I think you will have a pretty good tool. There are others who have used a screw-driver; but I would a great deal rather have that tool because I have used one and know that it is a great deal better.

Dr. Mason—I do not bruise the wood with this. Being square-cornered it gives more surface to pry with. I would not have a tool with an implement at both ends; it is too hard on the hands.

The convention then adjourned until 7:30 p.m.

[Continued next week.]

CONTRIBUTED ARTICLES

Advice About Adopting New Inventions.

BY C. P. DADANT.

I have several times been askt for advice regarding new methods, new inventions, which are, from time to time, recommended by a number of leading men, and which sometimes necessitate, for the bee-keeper who wishes to follow them quite a change in his apiary outfit, hives, supers, frames, etc.

I would strongly urge the novice to be very cautious in accepting and putting in practice new things, even if they have been put forward by men of merit. In the work of progress steps are very often taken in the wrong direction, which appear at first to have been properly guided.

A very notable instance of how men of ability may be drawn to things that are of but little practical value simply because they look inviting at the outset and appear with outward advantages, was to be seen in the inventions concerning inverting bee-hives and frames, which were the rage some 12 or 13 years ago, and for a year or two bid fair to overthrow all other styles of hives.

When a hive of bees is inverted, that is, turned bottom side up, and allowed to remain in that condition for some time the bees find themselves compelled to change the place of their honey, which they always keep above their brood and as far from the entrance as possible. If this is done at the time of the honey crop, and a super is put on when the hive is inverted, the result is that all the honey thus moved is put into the super. This is sufficient to make a very nice argument in favor of this method, and at the time of which I speak the bee-papers were full of the inverting theory of the great advantages of that method which some thought new, altho it had been in use in Europe as early as the beginning of this century.

Dozens of different hives and a number of inverting frames were devised, some were patented, and it even lookt as if there might have been two or three infringement suits begun to make the matter still more interesting. Where are the inverting folks now? Where are their methods followed? They had evidently lookt at only one side of the picture, and had failed to see the disadvantages of their method until a more thorough and lasting experience had taken away their enthusiasm.

Progress is still coming, and we do not have the last useful discovery in bee-culture, in my opinion, any more than the last improvement in farming, or the last word of electricity. But what if a man should invest his money in all the supposed valuable discoveries of electrical appliances? How would the farmer succeed who invested in every new corn-planter, who bought every latest binder, because it had one point of superiority over some previous and already practical invention?

If you have a good, practical, movable-frame hive do not leave it for another just because that other seems to have a few points of advantage, for these may be more fancied than real. Do not drop your section-case because another one has lately been devised. Remember that there is nothing so discommoding to the apiarist as two different styles of hives, or of frames, in one apiary. If some new method strikes you as decidedly preferable, which requires a different outfit, give it a slow trial, and do not make the change until you are absolutely sure, by some practical experience, that it will prove actually preferable, either in convenience or in results. We can often build very bright theories, based upon isolated facts, which prove fallacious when put to the test, because something was overlookt at the start which had an unexpected bearing upon the result, or because the reasoning was based upon an error.

Yet, it is out of the question to reject everything and remain stationary, for the world keeps revolving, and those who stop on the way will soon be left far behind.

Hancock Co., Ill.

Bees and Fruit—Insect Jaws.

BY PROF. A. J. COOK.

I am led to take this subject from a statement made by Mr. Thos. W. Cowan, in his admirable address made before the last California Bee-Keepers' Association in Los Angeles, on the relation of bees to fruit. While I agree with him in all his conclusions—that bees do not even pierce or injure sound fruit, and that the bees are of far more value to the pomologist than are the flowers of the orchard to the apiarist—yet I have never thought that bees could not bite into the skin of ripe peaches or other fruit. Every bee-keeper knows that bees can even tear splinters from the hive and cut the cloth and foundation which he may place above or within the frames. That they can do this has always argued to me, convincingly, that they could tear into any fruit, and especially through the soft rind of the ripe peach, apricot or pear. Yet, while I believe it is possible for the bee to make such abrasion, I am very positive that they never do. From a study of anatomy of the jaw and observation of what bees do do, I believe bees can wound fruit; from a long, close study of the bees in the field I am sure they never cut through the skin. The first is opinion, to which I have no better right than has Mr. Cowan, until I witness the act, which I never have; the second is knowledge, gained from wide observation.

(*a*) The grapes in a vineyard are wholly free from bee visitors—not a bee is seen upon or among them—when lo! on some hot, sultry morning, all at once the bees swarm on the grapes in force. Yet for days the bees have been idlers, because the harvests were not. Does it stand to reason that the bees have all at once, with one accord, rusht to the vineyard and commenced to cut into the fruit and suck the oozing juice? No! Reason and observation alike show that the juice is oozing, and the bees rush to gather the wasting juice. Had the juice remained sealed by the unbroken peel no bee would have toucht it. But let the bird, wasp, or Nature through fermentation induced by wet or heat, cause but a tiny droplet of the juice to ooze from the grapes, and at once the odor attracts the bees, and they at once fix their suction-pumps, and commence the rapid work of juice-abstraction.

(*b*) I have repeatedly tried this experiment: I have placed sound grapes at the entrance, and even within hives at times when bees were in enforced idleness, and they remained sound, and were untoucht. All observers know how ravenous bees are at such times, and know that were their habits and Nature in accord with attack, no grape would remain for an hour.

I then pierced certain grapes with pin or needle, that the juice might exude, when, presto! the bees rusht to the bleeding fruit, and quickly suckt it juiceless. Yet no unpierced grape was disturbed.

Thus I have become convinced that bees do not delve for sealed sweets, but must be attracted by escaping odors. The wasp or bird may mine for the coveted nectar drop—the bee, never. The flowers that most woo the bees ever hang out open-moutht nectaries advertised by aid of bright, gorgeous petals, whose life service is to attract the bees. They also fling forth the penetrating odors, that the bees may be lured to the useful service of pollinating the flowers. Thus, the whole life experience of the bees is to go to exposed receptacles, not to those sealed and, so, odorless. Thus we understand why the bees are developt as they are, to seek not for hidden treasures, but for those only that are exposed for the very purpose of enticing the bees to valuable service.

It is suggestive that in Europe, and in the older sections of our own country, the idea that bees are enemies and not friends of the fruit-grower is never broacht. The fruit-men know that the bees are necessary agents and factors to full fruitage, and so the insects are ever welcome in the orchard and vineyard. Such sentiment is fast growing in Southern California. Soon the cry will not be against the bees, but the question will be, How can we manage so as to keep our fruit sound, that bees may not be attracted? and how can we fence against their injury and annoyance in the driers and canneries? Already improvements in these lines are being made. Soon they will, we believe, become perfected, so that the valuable services of the bees will be secured, with no count against these invaluable aids to fruit-growing.

THE JAWS OF INSECTS.

Apropos to the above, a word regarding the jaws or mandibles of insects may be of interest. These organs are often called the first jaws, as insects possess two pairs of jaws—these mandibles and a second less strong pair—the maxillæ. Often these second jaws, which are always just below the mandibles, are so jaw-like in form that they may be very effective in biting and crushing. In bees they are modified, and are elongated and grooved, and may be, on occasion, converted into a colossal sucking-tube. Both pairs of jaws are appended to the lower end of the side pieces, genæ or cheeks, and instead of moving up and down as they crunch, they move sidewise. In some cases they are very large, as seen in the stag beetles, and in the elephant beetle they have branches, and look not unlike the antlers of the deer or elk.

While the mandibles are always of one piece, and thus simple, they are variously roughened or toucht, as their functional needs require. In the locust they are roughened raspers, and can strip off the bark from the hardest twig. In the tiger beetle and wasp they are armed with sharp teeth, so that they can pierce and destroy the insect foe, or, in case of the wasp, can easily break into the pulp of grape or peach. These jaws are found strong and effective in wasps, bees, ants, slugs (larvæ of saw-flies), caterpillars, beetles, and the larvæ or grubs of the same, locusts and lace-wings and their larvæ.

Organs much used, and for a variety of purposes, are certain to be much modified. Thus, in the evolution of life, such organs have changed most, and so are most used in classification. Thus as teeth are of first importance in systematic zoology, so the jaws are much used in classifying insects.

Los Angeles Co., Calif.

Transferring Bees in Florida—Eating Honey.

BY MRS. L. HARRISON.

On page 647 the question is askt from Florida, whether to transfer bees now or wait until spring. The time specified for transferring at the North is just before fruit-bloom, as at that time there are fewer bees, less brood and honey, and a flow is expected that will stimulate brood-rearing and furnish the bees with the means of repairing and building combs. Are these conditions the same in all colonies, all over this great land of ours, at the advent of fruit-bloom?

I have spent seven winters in West Florida, and during that time I have not owned any bees there, but I have watcht their flying at every opportunity, and there was never a time, when they were on the wing, that they were not carrying either pollen or nectar. They did not appear to gather a great deal, but enough to keep them slowly rearing brood. They were, with one exception, the little black bees, and very irritable. The hives would be full to overflowing with bees in March, and swarms issuing; some seasons earlier or later.

I should think the best conditions for transferring would be after the close of the long drouth, soon after the summer rains had commenced, as there would be fewer bees, less honey and brood, than at any other season; the rains would bring forth bloom for the bees to work upon during the winter. As an example of the difference in time of blooming of golden-rod in Illinois and Florida, here we find it in September; in Florida I gathered beautiful bloom on Black's Island, in St. Joseph's Bay, in April.

HONEY CAUSING SICKNESS.

I think that we need to do a little missionary work along this line. When we hear of persons who cannot eat honey without being sick, take them some pure white clover or other honey, and induce them to try it. I think, with few exceptions, they will find out that honey no longer makes them sick. It was pollen and bee-bread mixt with honey that disagreed with them.

Frost has not killed the bloom up to date.

Peoria Co., Ill., Oct. 17.

Importing Apis Dorsata from the Philippines.

(*Reported in the Chicago Tribune of Oct. 19, 1898.*)

There is one race inhabiting the Philippines which will be a welcome addition to American citizenship, and will be afforded every facility and inducement to immigrate to the United States and engage in the skilled labor in which it has no peer. This is the giant East India honey-bee, and an investigation of its work and immense capacity for producing honey and wax has interested the Department of Agriculture in the consideration of an early effort to introduce it into the United States.

Secretary Wilson said in connection with the proposed importation of these bees to the United States, that a special appropriation would be askt in his coming report to Congress for the investigation of the bees of the world, and a colony of the big Philippine "honey-makers" would be brought to America as soon as the question of their value and the possibility of their acclimatization has been fully determined. There will also be an appropriation requested for the study of the agricultural and kindred products of the newly acquired territory of the United States, and even under this head the great honey-bees of the East could be introduced by the department to this country.

To scientists this bee is known as Apis dorsata, a species common throughout the tropical regions of the East, and in the Philippine Islands the largest variety of this species is found. It is nearly one-half larger than our native honey-bee, and builds a comb, heavy with wax and honey, five or six times as large as the ones that are found in American orchards and forests.

In addition to the enormous manufacturing capacity of this particular bee, its introduction will have the important effect of securing from some of the richest honey-bearing plants of the United States the sweet juices which now remain ungathered. The propagation and increase of these plants will also be immeasurably assisted by other services the big bees will render. These extraordinary results will be brought about for the reason that the giant of the East has a tongue nearly twice as long as our native bees. All these little workers get at the honey in the flowers with their tongues; but many blossoms have such deep wells that our native bees cannot reach it, and, knowing this through inherited tradition, never try. The principal honey-bearing flower which our native bees find too hard a problem for their limited honey-pumps is red clover. The long tongues of the big Philippine bee would find these clover blossoms a mine of sweetness, and thousands of tons of honey would be yielded up that is now practically a loss to the world. In return for the honey these bees would find in the red clover their introduction to that plant would prove an inestimable assistance to its reproduction. Bees play a most important part in this operation, carrying as they do the pollen of one flower to another, the fertilizing powder clinging to the limbs and body of the little insect.

The question of the possibility of acclimatizing these inhabitants of the Philippines in the colder latitudes of America is not discouraging. The giant bees are found in the mountain regions all through India, and have been seen busily at work at altitudes of 5,000 feet. In the Philippine Islands their colonies are most numerous in the mountains, as the indefatigable quest of the natives for their honey-combs has driven them to the less thickly inhabited regions. The Filipinos find their daily bread a rather easy proposition, but they are fond of honey on the staff of life, and wax is next to gold in its attractions for fortune seekers.

In the East wax is a principal article of staple commerce, due to the manner in which the clothes worn by the natives are dyed. These cloths, when fresh woven, are covered with a thin layer of wax, leaving exposed the portions which it is desired to dye. The cloth is then soakt in the dye, and the wax which covers and protects the fiber where it has been spread prevents any of the waxt parts from taking up the color. This manner of dying is so general in the East that there is a tremendous demand for wax at all times. The wax also is exported in large quantities to Europe for making candles.

The commercial probabilities of the introduction and increase of the giant bees to the United States would principally affect the production of wax. This commodity has risen so greatly in price through the invention of the graphophone, that the manufacturers of wax-goods often have been without material for their product.

The big bees build their hives on tall forest trees, or on the overhanging ledges of inaccessible cliffs. Branch swarms build near the parent colony, so that in a few years an immense bee-settlement often grows up in the forest. To discover one of these is almost certain fortune to a Filipino. In appearance the giant bee is a smoky, glittering, irridescent black, of wasplike figure, with orange bands encircling its body. There have been reports that this bee is most ferocious, and on account of its great size is extremely dangerous, but one of the bee-experts has seen and handled them in their jungle haunts, and he tells a different story. They are such busy and persevering workers, according to his account, that they have lost dexterity with their stinging apparatus, and tho they may alight full of wrath, and with evil intent on human hand or neck, they do not handle their offensive weapon with skill, and it takes them 20 or 30 seconds to get their sting in working order.

The manufacture of wax by the bees is an interesting commercial problem. Bees secrete wax by eating honey, and as it takes about 15 pounds of honey, worth 10 cents a pound, to make one pound of wax, which will seldom bring more than 25 cents a pound, bee-keepers do not encourage the manufacture of wax by their bees.

Petitions have been coming in to the Department of Agriculture for years asking that the Government introduce these giant bees into the United States. Many years ago several individuals tried to get the bees for themselves by sending to the United States Consuls in the East and asking that queen-bees of the desired race be obtained and forwarded to them. No attempt at bringing them here has ever been successful, tho one was prevented only by illness that deprived the bees of the proper care, which he alone could give them, from bringing to the United States a colony of these bees which he captured in the jungle. While he was sick in bed en route to the United States with these bees no one else on the vessel would attend to them, and so they all died.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Spelling Reform—The T Super.

B. F. Onderdonk, referring to page 547, and the spelling reform, writes that of course Editor York "will not strike his flag when a fight is in sight, but all his cohorts would be mast around the mast to defend his colors. Doubtless reform in some words is necessary, and tho I would not like to go back to the orthography of two centuries ago, still I think it hardly fair to make the charge of prejudice against me if I *do* think much of Editor York's reform spelling looks incongruous. I won't stop the paper, tho."

Well, Mr. Onderdonk, I'll not insist too strongly on the matter of prejudice, but there may be nothing unfair in my saying that 200 years from now it is quite possible people will consider "massed" just as strange spelling for "mast" as the spelling of 200 years ago now looks to you. If you are right in saying, "Doubtless reform in some words is necessary," I'd like to know what needs reforming more than using "ed" for the sound of "t."

Mr. Onderdonk writes further: "Now I trust you will excuse me, but I am going to criticise another thing I never tried, that is, the T super. You say regarding the tall sections and peep-holes in the lower corners, you don't find but they are just the same as the 4¼. If, as I fancy, you used the T super, this must be expected; because the T makes each section entirely isolated. To get the bottoms finisht clear across, communication from end to end of the section-holder must be complete." To which I may reply that the tall sections to which I referred were in Danzenbaker supers, fence and all, and the square sections in T supers.

C. C. MILLER.

Properly Cleaned Sections of Honey.

How is it that honey you see in store windows is so clean, and the sections look as if they never had any bee-glue on them? How do bee-keepers get them this way? I use the Root hive and the sections fit as tight as they could without breaking when putting them in the frames. MARYLAND.

ANSWER.—The answer is easy. Every section that is not perfectly clean when taken from the bees is thoroughly cleaned by scraping with a knife, or cleaned by one of the section-cleaners about which so much has been said within the last year or so. In some regions the bees gather more propolis than in others. There is also a great difference in the time of the season. Early in the season and while honey is coming in with a rush, sections may be taken off so clean that they need scarcely any scraping. If left on till late in the season they will be badly daubed with glue, and elbow-grease must not be spared if the best price is to be obtained.

Moving Bees a Short Distance.

I am a young bee-keeper, having about 20 colonies. I wish to move them about 20 rods. When is the best time?

NEW YORK.

ANSWER.—You will be pretty safe to move them after they have not flown for a month or so. The only trouble is that they may not have a flight again for a few weeks after being moved, and the disturbance of moving will be bad for them. If you are prophet enough to know when they are going to fly, and then move them the evening before the day of their flight, you will hit it just right. Possibly you can move them so carefully and quietly as not to stir them up enough to do any harm.

Transferring, Bee-Paralysis, Etc.

1. I have a colony of bees in an old hive that I want to transfer into a chaff hive in about three weeks, when all the brood is hatcht. Could I transfer them safely if I give them five frames of honey, and, besides, feed them?

2. What is the right way to put chaff over the brood-frames? Could I put the board over the brood-frames first, then chaff in a bag on the top?

3. One of my colonies has so many shiny, black, hairless bees. I can take them in my hands and handle them roughly, and they don't sting. What are they? Robbers? And how is best to get rid of them?

4. Two weeks ago I bought an Italian queen from Texas; I introduced her and it took four days from the time I introduced her before she started to lay. Was she not mated because she did not start to lay sooner?

5. How can you tell a mated queen from a virgin queen?

NEW JERSEY.

ANSWERS.—1. With five Langstroth frames filled full of honey there ought to be no trouble about the bees wintering without any additional feeding.

2. It doesn't matter much how the chaff is put in, so it is not allowed to sift down between the combs among the bees. Your plan is all right, only the board between the frames and the cushion of chaff should be thin, better not more than ⅜ of an inch.

3. The probability is that the colony has bee-paralysis. In the North it is not likely to become very serious, altho in the South it leads to very heavy losses. Many cures have been given, but none that seem to be always successful. One of the latest has been reported in every case successful where tried, but it is possible that the next time it is tried it may prove a failure. It is, however, very easily tried. The plan is simple. Let the diseased colony exchange places with a healthy one, putting the sick one in place of the well one, and the well one in place of the sick one. It isn't a hard matter to try it. But the probability is that if you don't do a single thing the disease will disappear of itself. That is generally the case in the North.

4. It is not an unusual thing for a queen to be some time starting to lay after she has been stopt for a few days. Indeed, it would be a rather strange thing if she had started in to lay at once; for it was a long journey from Texas to New Jersey, and at this time of year queens are less inclined to lay than earlier.

5. You can only tell after they begin to lay, altho if you are experienced you can tell something by their looks. After the queen lays and her brood is sealed, if the sealing is flat, as the sealing of worker-brood always is, you may count that the queen has mated. On the other hand, if her brood that is in worker-cells has round cappings, something like little bullets, she is not fertilized and is worthless. Take off her head at once.

Thinks His Bees Have Paralysis.

Some weeks ago I wrote to you about two colonies of bees that I thought something was wrong with. From your reply I am certain they had bee-paralysis. One seems to have recovered, and the other is about the same. I have tried the salt cure, on this one, but can see no benefit from it. They are still driving out sleek, shiny, half-starved looking bees. There is a peculiar trembling motion among all the bees at the entrance, not seen about the other hives. At the same time the bees seem to be in good condition, plenty of stores for winter, and at present are working with a vim on iron weed; not a colony in the yard is working any better; hundreds of acres of iron weed in full bloom on all sides, and if the weather will keep warm I am in hopes of getting a fine surplus. Is there any danger of this disease spreading? Would it be best to destroy the colony and take no chances? VIRGINIA.

ANSWER.—I'm not sure that there's anything contagious about the disease. As you probably know, it is much worse in the far South. In my own case, in Northern Illinois, it has made its appearance at different times for a number of years. Without any attention being paid to it, it disappeared each time of its own accord. If I had tried any of the various remedies, I might have given credit to them, and I think it very likely that many who have attributed its disappearance to this or that remedy would have had equal success if they had allowed the disease to run its own course. I never destroyed but one colony on account of it. That colony was so bad that there was no profit in keeping it, altho it is possible that if I had tried it another year it might have done better. I don't remember that I've had a single case this year. So you see that in my case there's no cause for alarm, but at the same time it may be well to keep in mind that in some places it is a terrible scourge. If your colony is doing well, it may be as well to let it alone.

Golden Method of Producing Honey—Using Two 8-frame Hive Bodies.

1. Where can the "Golden method" of producing honey be obtained? When and where was it publisht?

2. Which text-book on apiculture, if any, contains explanations as to using two 8-frame hive-bodies to accommodate the queen? I am at a loss to know if the second brood-chamber is to go on top or below, and if excluding-zinc is used?

OHIO.

ANSWERS.—1. See American Bee Journal for July 30, 1896, page 481; also page 834, of same volume. [We are unable to supply the copies of this paper containing the pages named, but will try to republish the method before another season is here.—EDITOR.]

2. I doubt your finding it in any of the text-books. Probably all do not follow exactly the same plans, but I can tell what is my own practice, premising that I cellar my bees and work for comb honey. Before the queen becomes crowded in the one story, I put the second story *under*. If more convenient to do so, I may give the second story much earlier than it seems to be really needed, and believe it to be rather advantageous to do so, as the bees will keep the extra combs in better condition than they will be kept in if left away from

them. Moreover, there may be some honey in the combs given with the second story, and it's a good thing for the bees to have the honey. I think some put the second story above, in which case it should not be given a day before actually needed, as it costs something to keep so much extra room heated. When the extra story is given below, it puts no extra labor upon the bees in the way of heating idle room, for heat ascends, and the bees can work down into the lower story just as fast as the room is needed. No perforated zinc is used between the two stories, for that would defeat the very thing desired—the enlargement of the brood-nest. When it comes time to put on supers, one story is taken away, leaving the best eight frames of brood, no matter in which story they are found. The frames taken away are used wherever they are needed, and if not needed anywhere in particular, they are piled up, three or four stories high, on some colony that is perhaps not strong enough to do good work in supers. I think some leave the two stories throughout the harvest time, but for some reason I could never get as much honey by so doing. When the section-supers are taken off, the second story is placed on top, an excluder being placed between the two stories. If there is a fall flow of dark honey, the bees are in no danger of being crowded for room. When it gets so late in the season that bees will gather no more than to supply their daily needs, the extra story is taken away, so the bees can glue up for winter.

Cleaning the Solar Extractor Glass.

The underside of the glass in my sun wax extractor gets covered with a waxy film, which obstructs the light and heat. How can this film be removed? CALIFORNIA.

ANSWER.—Try rubbing off with newspaper when the glass is very hot. Gasoline may help if the paper alone doesn't answer.

Old, Black Brood-Combs.

When the comb in the brood-chamber becomes old and black, what should be done? If it should be broken out, what would be the best time of year? BEGINNER.

ANSWER.—Let it alone. If you give the bees their choice, they will use old, black combs in preference to nice white ones, either for brood or honey. The old combs have silk linings in the cells that make them warmer for winter. I know the objection is sometimes made that the cells become filled up with the silk cocoons and are thus made smaller, consequently the bees reared in them will be smaller. But the deposit is largely at the bottom of the cell, and the bees lengthen out the cells to make up for it. If you will measure, you will find that a piece of old black comb taken right out of the middle of the brood-nest will be—if it is old enough—an eighth of an inch thicker than a piece from the same place that has not been used more than two or three times for rearing brood. So of course those cells have been lengthened out. I have combs more than 25 years old, and so long as they have no other fault than age and black color, I wouldn't think of discarding them.

BIOGRAPHICAL

MILES MORTON.

The subject of the following sketch was one of New York's best bee-keepers. We had the pleasure of meeting him at the Buffalo Convention of the United States Bee-Keepers' Union in 1897. He past away Sept. 1—last month. His brother-in-law, Mr. S. A. Niver, has kindly furnisht the following biographical notes:

Miles Morton was born in Groton, Tompkins Co., N. Y., 62 years ago, making it his home during his entire life time, which terminated Sept. 1, 1898. His education was obtained at the "little red school house" and Groton Academy.

At an early age he commenced work in his father's carriage manufactory as helper in the blacksmith shop, soon graduating as an expert carriage-ironer, wood-worker and painter. Upon reaching his majority he manufactured carriages in his own shop for a time, and then engaged in the grocery business in company with his brother-in-law, which partnership continued eight years, when he sold out his interest to enter the field of his pet hobby—the bees. For 20 years his careful, skillful labors was devoted to this his favorite pursuit; experimenting with new methods in management and supplies, without regard to cost or trouble, until his shop-chamber is a veritable "old curiosity shop;" adding machinery from time to time until his little supply factory is as nicely equipt, and turned out as fine work, as could be found anywhere. It was headquarters for the bee-keepers to gather and talk over the business generally; and it was commonly remarkt that when a bee-keeper got into a snarl—that condition of not knowing what to do with 'em—it was the best thing to carry his trouble to Morton, who invariably knew just what to do, and was as certain to cheerfully give the advice.

Speaking of his mania for experimenting, his brother Harvey told me an incident in his earlier life as a bee-keeper, in trying a new scheme for transferring a swarm from an old box-hive to a movable-frame one. He put the box-hive in a tub and slowly poured in water to drive the bees into the frame hive above—and drowned every bee!

In politics, Mr. Morton was a prohibitionist, was a member of the Baptist church, a sterling, conscientious, honorable American gentleman. And what prouder title could any one wish for?

Naturally of a cheerful, sunny disposition, he drew all classes and ages to him, and the beautiful simplicity and earnestness of his life kept them as warm friends. His shop was the favorite play-ground of the children, to whom he was always "Uncle Miles"—the one person never too busy or too weary to examine the wounded pet, or mend the broken toy over which the childish heart was grieving.

Possest of great depth and tenderness of feeling, he entered into the joys and sorrows of other lives in an unusual degree, and his home was ever the refuge for the suffering and the tempted, a shelter and home for the homeless.

Upon that home the shadow of his death rests most heavily, and the party of his choice, the church that he loved, the brotherhood of bee-keepers, and the community at large, mourn the loss of that noblest work of God—a truly good man.

S. A. NIVER.

The editor of Gleanings, who so kindly loaned us the half-tone engraving of Mr. Morton on the first page, had this to say of our friend when announcing his departure, in his paper:

> Mr. Morton was one of the keenest, brightest bee-keepers in New York. He was a fine mechanic of the Dr. Tinker order; and back of his beautiful home he had a nicely equipt little shop where he loved to work, and make things for his bee-keeping friends. He was a natural-born mechanic, as could be easily seen from the exact workmanship and beautiful finish of all he did; and bee-keepers for miles around used to go to Mr. Morton for their supplies.
>
> I have traveled pretty well around that section of country, and everywhere Mr. Morton was spoken of in the highest terms, not only as a successful bee-keeper, but as one who made the best supplies in the world.
>
> Well, it was this same Morton who has been using fences for the last 12 years, and in his quiet way has been supplying his friends and neighbors, not only with fences, but with everything else in the line of bee-keepers' supplies.

Not having an extended personal acquaintance with Mr. Morton, we feel that we cannot add much to what is exprest in the foregoing. But we are certain, from the sincerely generous terms in which those who knew him best have spoken of him, Mr. Morton will be greatly mist in every walk in life; the influence of his devoted and unselfish daily living will exist long in the memories of those who fortunately enjoyed a close personal acquaintance.

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BEE JOURNAL
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Telling Your Experiences of the past season—writing them out—will not only do you good, but will also be helpful to others. So we wish here and now to invite our readers to send in whatever they think will be of value along the line of their experiences with the bees this year.

Do the best you can in writing all out as clearly as possible, and we will see to the rest. Of course, we may not be able to publish everything that is sent us, but we will promise to do what we can.

The long fall and winter evenings will soon be at hand—a splendid time to write. Use pencil, if you like, and write only on one side of the paper.

◆

Adopting New Things.—While Progress is the watchword of the present age, let each satisfy himself that a new departure is really progressive before rushing headlong after it. We are led to this remark, upon reading the article on another page, by that eminently practical and far-sighted bee-keeper—Mr. C. P. Dadant. For over a third of a century in this country, and before that in France, the Dadants made a distinct success of honey-production; and we know no one whose advice we would sooner unquestionably follow along many lines in bee-keeping than these same Frenchmen—Chas. Dadant & Son.

Many bee-keepers—and particularly the youngerly element in the ranks of beedom—seem to think that every new thing or invention that is announced is "just the ticket"—will revolutionize bee-culture. Ordinarily, it hardly pays the bee-keeper to experiment very much. Whatever is done in that way should be carried on to a very limited extent, unless one can easily afford to invest the necessary time and means to conduct such experiments. For that reason our Government has wisely establisht agricultural experiment stations whose expenses are borne by the Government, and not left to individual farmers who might wish to make experiments and yet could ill afford the cost.

Of course, no one would discourage experimentation in bee-keeping. New things will often arise that are really valuable, and will prove a boon to the whole bee-keeping fraternity. Note the honey-section, foundation, bee-escape, etc. But when it comes to the adoption of a certain kind of hive, requiring a certain sort of management, then it is certainly a wise thing to "go slow" in adopting it. What may be a perfect success in one bee-keeper's hands may be a perfect failure in another's, and especially in cases where locality has much to do with it.

But if you feel disposed to try new things, go at it gradually. In adopting changes "make haste slowly," unless there is no doubt whatever as to the gain to be made by changing.

◆

Beginners and Bee-Books.—We feel that about once every month or two we ought to say something on this subject. Especially do we feel that just now is a good time to offer a little advice to those beginning in bee-keeping.

There are many people who have bought a colony or two of bees, or who feel the "bee-fever" coming on them, who think that all they have to do is to call on some busy man that has studied out the subject, and ask him simply to tell all he knows about it, never stopping to think that in so doing a great injustice is being done. In the first place, the busy man can't afford thus to waste his time, and, secondly, the "feverish" would-be beginner couldn't remember a tenth part that is *told* him. What he should do, is to get at least one of the best and most complete books on the subject, and then read for himself. A thousand and one of his simple questions can thus be answered by his own effort, and he will get a more definite and comprehensive idea of the whole subject of bee-keeping. If we did not have a bee-book for sale, we would offer the same advice, if afforded the opportunity of doing so.

"Langstroth on the Honey-Bee" is the oldest of the leading books treating fully on bees. It has been thoroughly revised by those practical and successful bee-keepers—Chas. Dadant & Son. This book contains over 500 pages, is neatly and substantially bound in cloth, and is mailed for $1.25, or is regularly clubbed with the American Bee Journal for a year for $2.00. But we are going to make this very liberal *special offer for the next two weeks*—or ending Nov. 15: To all who will before that date pay their subscription to the end of next year (1899), we will mail a copy of the Langstroth book for only 70 cents. This offer does not apply to any subscriptions sent in before the date of this number of the Bee Journal.

Now, how many will accept the above offer before Nov. 15? Remember, it ends then, and will not be renewed.

◆

Apis Dorsata Again.—From the article on page 677 it will be seen that evidently another attempt is to be made to import the once famous "giant bees of India"—but now transferred to the Philippine Island, perhaps soon to pass to the possession of the United States. We see that Secretary Wilson is reported as saying that these bees "would be brought to America as soon as the question of their value and the possibility of their acclimatization has been fully determined." We are in favor of this method of procedure. First, thoroughly test them in their native land, and if found to be as represented by those who are so anxious to have them imported, then bring them in.

But we wonder what certain honey-producers will say when they read that if Apis dorsata proves a success in this country they will be able to draw from the now unworkt flora "thousands of tons of honey that is now practically a loss to the world." What would be the effect upon the already somewhat low price of honey, to have "thousands of tons" more thrown upon the market? As for ourselves, we would not be alarmed, but we shouldn't wonder if a good many bee-keeping specialists would hesitate before lending their influence toward the introduction of what they would think might tend to lessen their own chances of success.

As to the increase of wax-production, by the Apis dorsata, we do not see that the demand is yet so greatly exceeded by the supply. The very best yellow beeswax will net scarcely 25 cents a pound in the open market, which is not an exceedingly high price. But even at the present price of beeswax, there is no fortune in its production; and to greatly increase the supply will hardly make wax-production more profitable. If bee-keepers could be assured of a uniform price of beeswax at 28 to 30 cents a pound, they might feel that it would pay to increase its production with the bees they now have; but often beeswax does not command so good a price as mentioned.

We shall be interested in watching how the Department of Agriculture progresses in its experiment with Apis dorsata in the Philippines, when once it is authorized to proceed with the investigation. Even if it is decided never to bring this bee to the United States, it will be of scientific interest to have its value, or worthlessness, establisht.

◆

Healthful Honey.—Under this heading, and with the sub-head, "Used Instead of Sugar, It is Economical and Palatable," appears a quarter-column in the Baltimore American, in which it is shown that a pound of good honey will go as far as a pound of good butter, and costs much less; will keep indefinitely, while butter must be eaten fresh; it is more wholesome in hot drinks than sugar; together with some useful information as to the qualities and kinds of honey. It is a good thing to have such information put before the public, and when such papers as the Baltimore American take the pains to copy it from such a paper as the Philadelphia Times, it ought not to be difficult for bee-keepers to secure its insertion in their local papers. They will find the article in question, word for word, together with much more equally interesting matter in the little pamphlet "Honey as Food," which can be had at such low rates for free distribution, at the office of the American Bee Journal. That the Philadelphia Times failed to give the proper credit is a small matter, only so the truth may be widely publisht.

◆

To Exterminate Weeds or Grass, Editor Root says in Gleanings, "is to apply a sprinkling of salt around the place where you wish it killed out. It does not usually pay to try to kill out the grass or weeds except in front of the entrance to the hives."

◆

Colonies Short of Winter Stores.—Editor Root, in Gleanings for Oct. 15, gives this timely note of warning:

There is every reason to believe that, owing to the poor honey crop this year, there will be a scarcity of stores in the hives for winter. Many bee-keepers, whenever a failure of honey occurs, will philosophize something after this fashion:

"Them bees didn't get me no honey this year. If they can't pay for theirselves, I guess I'll let 'em go Gallagher."

And they do.

Another class, also forgetting the big crop of last season, and being too busy with their other work on the farm, will just simply neglect the bees. It did no harm to let them go last season, because there was plenty of honey in the hives; so in a half-hearted way they "guess" there is enough in them this fall. At all events, they are too busy; and if the bees die—well, perhaps they will buy more next season.

The careful, provident bee-keeper knows perfectly well that it is very unwise to let bees shift for themselves at any time; and there is scarcely one who looks back over the past, who will begrudge sugar fed that the bees did not earn that season, but perhaps may earn next year, or some time in the future.

There are quite a number of bee-keepers—so-called—who simply neglect their bees, and then are surprised that they die in winter. No doubt a great many colonies simply starve before spring—all because their owners failed to provide food enough to carry them through. No farmer would treat his horses and cows in that fashion, and expect to succeed. Neither can the bee-keeper.

THE WEEKLY BUDGET.

Mr. H. W. McComb, of Washington Co., Iowa, called on us last week, when on his way to visit friends in Pennsylvania. He reports that white clover is just everywhere this fall in his locality, which he thinks promises a great stand of it next year.

Mr. C. W. McKown, of Knox Co., Ill., dropt in to see us Oct. 20. He has about 100 colonies of bees, and secured only about 1,000 pounds of honey the past season. One year he had about 13,000 pounds, and sold all in near-by towns. Mr. McKown has taken the Bee Journal almost continuously since 1872.

Dr. C. C. Miller, of McHenry Co., Ill., writing us Oct. 15, had this to say about his nearly 300 colonies of bees:

"I got the bees home from the out-apiaries this week, and will hope now for one good day for a flight, and then they can go into the cellar any time when it looks as if cold weather had come to stay, which time may be any time within the next six weeks."

The Des Moines Incubator Co., of Des Moines, Iowa, are among our annual and reliable advertisers. We understand their incubators take front rank among machines of that class. If any of our readers are expecting to adopt the artificial or incubator method of raising poultry, it might be to their interest to correspond with the above firm, not forgetting to mention having seen their advertisement in the American Bee Journal.

Miss Nora Hutchinson is the 20-year-old twin daughter of W. Z. Hutchinson, editor of the Bee-Keepers' Review. She is a violinist, and last week we received a splendid photograph of herself with violin in hand, taken by her father. Miss Nora and her twin sister, Cora (who plays the piano) are great helpers at home—one does the housework and the other sets the type on the Review. How's that for a "team?" Success to them all.

Mr. A. W. Hart, of Stephenson Co., Ill., gave us a short call Oct. 20. He is the man that has had a little good-natured controversy with Mr. Bevins, of Iowa, on the question as to Italian bees gathering better honey than blacks. Mr. Hart is 69 years of age, and has 31 colonies of bees, but got very little honey this year—so he was quite "in style" with many other bee-keepers. Last year he had 11 colonies in the spring, increast to 22, and harvested about 800 pounds of honey.

Dr. C. C. Miller, referring to something Mr. Root said in Gleanings, wrote this "straw" for that paper:

"I may say that, after more than 30 years being 'dry,' Marengo now has saloons. I think it a moderate statement to say that I've seen more drunken men on the streets in the past three months than in 10 years before."

That's perfectly natural, Doctor. If a "drunkard factory" didn't turn out drunken men, pray what else would it do? That's its business. The thing that surprises us is, the fact that some people are so willing to furnish *their boys* to keep up the supply of drunken men these "drunkard factories" turn out. What a pity that so many people value the almighty dollar more highly than a man's soul. But some glad day it will be different. "When will that be?" did you ask. Why, when all the righteous people of these United States decide *to stand together* against the awful saloon curse.

BEEDOM BOILED DOWN

Uniting Weak Colonies is made easier, says Editor Root, by bringing them from an out-apiary, for then they will not go back to their old places.—Gleanings.

Honey-Dew for Winter Stores.—The editor of Gleanings has advised leaving honey-dew in the hives for winter. But it seems all honey-dew is not the same as at Medina. M. V. Facey says that in Minnesota it is fatal as winter food. One winter he had in the same cellar a lot of colonies filled up with honey-dew, and another lot that had been fed sugar syrup. Only one with sugar died, and only one of the others lived.

"Whither are we Drifting?" is the question askt in the Progressive Bee-Keeper by H. H. Hyde, in view of the many inventions and changes made in bee-keeping appliances (but before he gets through he advocates a new separator of his own invention), especially mentioning the change to smaller sections, and the "cut-off top-bar brood-frame," with a hint against the plain section and fence separator. The editor is emphatic upon this last point, favoring slotted separators "instead of catering to certain supply dealers' pocket-books by buying their glued-up clap-traps."

Why Fruit Does Not Set.—A bulletin of the Kansas Experiment Station gives four important reasons why fruit may fail to set:

1. The pollen may be insufficient in quantity. This applies particularly to the strawberry, the remedy being to plant pollen-producing sorts, the so-called staminate sorts, along with the so-called pistillate sorts.

2. "Insects may be prevented from visiting the flowers during the receptive period. If bees are kept from fruit-blossoms by netting or other artificial means, the amount of fruit set is little or none. It not infrequently happens that inclement weather prevents, or hinders the flying of bees during the period when the flowers are receptive. A fruit-tree, half of which was subjected to a continuous spray of water during the flowering period, produced no fruit upon the sprayed portion, but an abundance upon the other. A failure due to the above-mentioned cause cannot well be prevented, but may be modified by having bees near at hand to utilize the short favorable periods which do occur."

3. In some varieties of fruits the flowers are self-sterile, and the remedy is to plant with them other varieties, as Seckel with Bartlett pears, and Concord with Brighton grapes.

4. An insufficient supply of bees will hinder the setting of fruit. While other insects may take part in the carrying of pollen, the fruit-raiser must rely chiefly upon honey-bees. Experience shows that tho hungry bees may fly two or three miles, hives should be within half a mile of the orchard or small-fruit patch.

Sugar Syrup for Feeding Bees.—G. M. Doolittle gives in Gleanings the following plan for making syrup that will not crystallize: Stir 30 pounds of granulated sugar into 15 pounds of boiling water. Keep stirring till the sugar is nearly all dissolved; then let come again to a boil and skim off the scum. Take from the fire, put in five pounds of good extracted honey, stir a minute or two till well mixt, and you have 50 pounds of feed that will never crystallize. Editor Root thinks it simpler to take sugar and water, equal parts. Fill a honey-extractor half full of water, start the reel going, add sugar gradually, and turn vigorously till all is dissolved. Given thin to the bees, it will not crystallize. He says Dr. Miller does not even dissolve the sugar, but pours it in the feeder and then pours cold water on top. It may be well to remember that when fed thus thin, it should be given early.

Honey as Food is a neat little 24-page pamphlet especially gotten up with a view to creating a demand fo honey among should-be consumers. The forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 30 cents; 50 for 50 cents; 100 for 90 cents; 250 for $2.00; 500 for $3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

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We would suggest that those bee-keepers who did not produce any honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. The pamphlet, "HONEY AS FOOD," will be a great help in creating customers for honey. See prices on another page.

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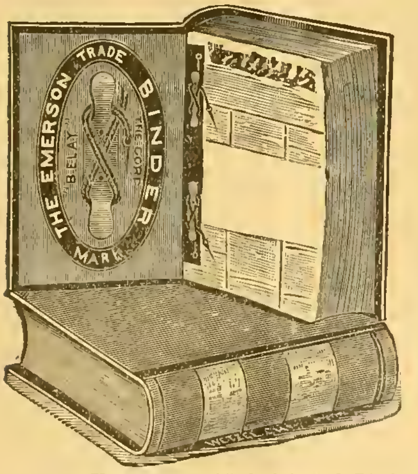
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GENERAL ITEMS

A Beginner's Report.

I have taken the American Bee Journal nearly a year, and think I have learnt enough to pay for the paper for some time to come. I started last spring with four colonies, and one of them queenless. I increast to 11, and lost several swarms because I could not be with them on account of other work. I took off 500 full sections of honey this fall. H. A. MARTIN.

Phillips Co., Kans.

Bee Journal a Revelation.

The sample copy of the American Bee Journal is received, and it has been a revelation to me. I never saw an up-to-date bee-paper before, nor heard of many things that this one contains. It has given me a glimpse of a new world, so far as bees are concerned. I have been keeping bees for 15 years, have about 20 colonies now, and am sorry that I do not know more about them than I do. J. R. PINKHAM.

Halifax Co., N. C., Oct. 10.

Poor Year for Bees.

This has been a very poor year for bees. I got only about 50 pounds of honey per colony. In 1897 I got about 150 pounds per colony, spring count. There is not much interest taken in bee-culture around here.

The American Bee Journal's reform in spelling is all right. Keep on in the good work. I could not get along without the American Bee Journal. S. J. MAGUIRE.

Benton Co., Iowa, Oct. 15.

Visited Mr. Doolittle.

I visited Mr. G. M. Doolittle the last week in September, and found a paradise—a nice large house and barn in a pleasant nook; a large man with a large heart and pleasant manner; and a nice lot of bee-hives kept in neat order. I have always wanted to see Mr. D. and his apiary, as I have read so much of his writings. I wisht for a camera to take pictures for the "Old Reliable." It was a great treat to go through the shop and see the appliances and systematic manner of handling bees. And O, the nice comb honey was a great sight! And to see Mr. D. pick out the queens. What beauties they were!

The bee-cellar is very simple and nice. I wish I could have one like it. I think every bee-keeper would if he saw it. J. MUNROE QUICK.

Onondaga Co., N. Y., Oct. 5.

Only a Quarter Crop—The Union.

After all, I failed to meet with the bee-keepers at Omaha. On Monday of the week before the meeting I was taken sick and for two weeks was under the doctor's care every day, and not able to be off from the bed. I am now able to get around and do a little work.

I have re-queened a few colonies of bees and fed all that seemed to be short of enough honey in the brood-chambers to carry the bees through the winter safely. Happily, only a few colonies needed feeding, and I had enough unfinisht sections to give to these.

The white honey harvest bore a strong resemblance to a failure here. I got what I considered about one-fourth of a crop. There was no surplus from fall flowers, but the brood-chambers seemed to get heavy in September.

It was my intention, last spring, to let the bees swarm once, if they would, and then work the swarm for surplus; but honey was so scant at swarming-time that I had

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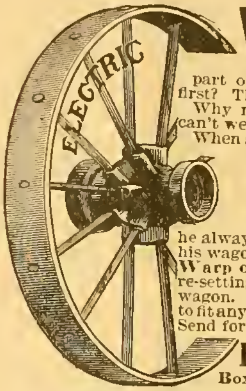

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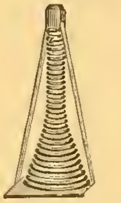

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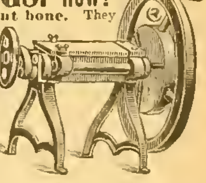

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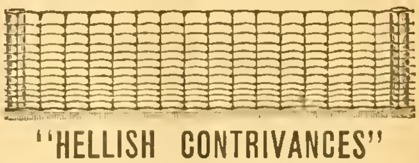

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only five or six swarms; and as the season continued unfavorable, I did not desire to have any more. Having now about as many colonies as I wish to keep at home, I shall soon have to choose between the prevention of increase, and the establishment of that out-apiary which was the subject of one of my dreams in my early bee-keeping days. I am inclined to think, on the whole, that I will let the bees swarm and shove them out into pastures new, in hives so big that they will feel a little discouraged about filling them, when swarming-time comes around.

I will send the dollar pretty soon to keep me in touch with the United States Bee-Keepers' Union. What a preposterous idea for a bee-keeper to entertain—the idea that he will not join the Union because he does not, or cannot, attend its meetings. The prevalence of this idea will do much to make and keep the Union a weak and inefficient thing. I have no expectation that I shall ever derive any pecuniary advantage or benefit from my connection with the Union. At the same time I believe it is a good thing for a man to keep his property insured.
EDWIN BEVINS.
Decatur Co., Iowa, Oct. 19.

Short Honey Crop in Utah.

The honey crop of Utah has fallen short of last year by at least one-third. The prices for honey have run from 8½ to 9¼ cents per pound for comb, and 4½ to 5 cents for extracted. I have been in the mining camps of Northern Idaho the past summer, and have done nothing myself with the honey. But next year I will look after the business as usual.

The American Bee Journal merits high praise for its interesting articles, and ability displayed in its editorial department.
GEORGE E. DUDLEY.
Salt Lake City, Utah, Oct. 12.

About Half a Crop in Minnesota.

We had a good time at the Winona State Fair, lately. The bee-keepers had a good exhibit, and the fair was a success in every respect, altho the bee-keepers report only about half a crop of honey in Minnesota. Tho our crop of honey was not up to the standard, there is one consolation that our bees seem in fine condition for winter, and we all feel encouraged for next year.
E. B. HUFFMAN.
Winona Co., Minn., Oct. 15.

An Idea of a Good House.

"Would you like to hear my idea of a good house to live in for farmers of moderate means? One essential, in a comfortable house, is to have the chambers over the living-rooms, with stove-pipes going up through the floor to the chimney. A common stove-pipe will keep a room warm enough to sleep in, or, if wanted warmer, a radiator in the pipe is as good as a stove.

Again, every home ought to have a bedroom on the first floor, large enough for two beds, for convenience in sickness. Another thing is a cupboard in the wall between dining-room and kitchen, with doors opening each way. Drawers beneath are nice.—Emma Pierce, in Livestock Indicator.

A Correction—Selling Honey.

On page 654 I am made to say that one colony gave me 163 sections and 130 pounds of extracted honey. This is a mistake. It should read 163 sections and *30* pounds of extracted honey. I think I am safe in saying that this colony gave me 185 pounds of honey. Some unfinisht sections were taken off that were not counted. A number of colonies gave me 150 pounds, mostly comb honey.

Since writing last I have made three long-distant trips with my horse, and sold over $65 worth of comb and extracted honey. I can get better prices and sell more out of my immediate territory, it seems. These

The Bee-Keeper's Guide

This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."

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☞ **See Honey Offer on page 682.**

three trips represent 4½ days' work away from home. I was away three nights, or one night for each trip. I expect to start out every Friday and get home Saturday. I sell my comb honey by the section at wholesale, and not by the pound. So far I have found but one man who objected to buy this way. I am careful to have each section in a case of practically the same weight. For my best grade I get 12½ cents a section, sections weighing 15 to 15½ ounces. For 14-ounce buckwheat sections, in 24-section cases, I have succeeded in getting 7 cents each. For 15-ounce buckwheat sections I don't seem to be able to get any more than that. I have come to the conclusion that it is more profitable to take my fall crop in the extracted form. I get 6 cents a pound for extracted buckwheat, and 8 cents a pound, or 30 cents a quart, including Mason jar, for light amber clover honey. E. W. BROWN.

Erie Co., N. Y., Oct. 19.

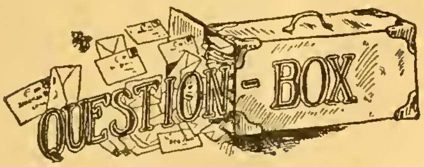
Bees Did Fairly Well.

My bees did fairly well for surplus this year, but are rather light for winter. I am feeding some now. H. E. MILLER.

Waldo Co., Me., Oct. 10.

The Requisite for True Success.

To make money is not the greatest requisite for true success in business. But to gain a reputation for honorable business methods, to have the confidence of business men, and the respect of employes, coupled with successful business management, should be the aim of all young men who enter upon a business career. I believe that the majority of successful men are of this type, and that few ever succeed in making money who have no higher purpose than gain.—Success.



In the multitude of counsellors there is safety.—Prov. 11-14.

Characteristics of the Ideal Bee.

Query 84.—What are the characteristics to be lookt for in the ideal bee—1, as regards honey-gathering; 2, prolificness; 3, color; 4, disposition; 5, size; 6, swarming propensities; 7, hardiness; 8, any other desirable qualities?—Iowa.

Emerson T. Abbott—I am not posted on "ideal bees."

E. France—There is more difference in location than there is in bees.

D. W. Heise—Too much for a youngster. Let the veterans answer this.

A. F. Brown—You have named them all. Prolificness and honey-gathering are the most desirable.

G. M. Doolittle—The ideal bee will never be obtained. The practical bee is here already in the shape of the Italian.

W. G. Larrabee—The ideal bee for me is the one that will produce the most and best honey with the least labor for the bee-keeper.

Jas. A. Stone—1. Only one answer to this—a good, industrious worker. 2. But one answer to this—if you do not have the bees you do not get the honey. 3. Like what is called the leather-colored Italian best. 4. Quiet to handle. 5. Large. 6. I do not believe the swarming disposition belongs to a particular race. The better the honey-flow the more they swarm. 7. To be sure, we want hardiness.

Dr. C. C. Miller—1. Greatest possible. 2. Possibly not the greatest. 3. Yellow. 4. Gentle. 5. Perhaps present size. 6. None. 7. Very hardy.

Mrs. L. Harrison—Yes; that of clinging to the combs, and of being able to defend themselves against their enemies, whether pilfering boys, bees, or moths.

Dr. A. B. Mason—Not worth while to take time and room to answer most of these questions. 3. Leather-colored Italians have been the most satisfactory with me.

C. H. Dibbern—It seems to me that you have answered your own question. All these traits are desirable, but the main thing is to get a bee that will "just roll in the honey."

Dr. J. P. H. Brown—This question can be answered by applying the adjectives: 1. "Great." 2. "Great." 3. "Good." 4. "Gentle." 5. "Good." 6. Prefix "Non." 7. "Great." 8. Already summed up.

R. C. Aikin—1. Industry. 2. The most prolific. 3. Bright desirable. 4. Mild tempered. 5. Quality before size. 6. Non-swarming desirable, but very improbable except in limited degree. 7. The answer is patent to all. 8. Your questions are too big for proper answering here.

Prof. A. J. Cook—1. Long tongue and energy. 2. Great breeders in time of harvest, and before. 3. Immaterial, tho color of Italian is good, as it is convenient. 4. Gentle, tho not so important. 5. Present average. 6. Moderate. 7. Good resistance. 8. Vigor and prolificness the great desideratum.

G. W. Demaree—Is there an "ideal bee" fixt in the minds of a considerable number of persons? How many would agree on the bee of the future, if a given number of bee-men had the power to legislate her into a "bee-ing." I have tried all the varieties of bees brought to notice, and I have found nothing I prefer to the carefully selected Italian.

R. L. Taylor—Well, well! Of course the ideal bee must be a good honey-gatherer, prolific at the right time, of good size and hardy. Color is immaterial, but in disposition she must be controllable, and she must not be given too much to swarming; and above and beyond all she must have a tongue long enough to reach the bottom particle of honey in red clover bloom.

O. O. Poppleton—1, 2 and 3. Answers to these questions depend much on locality. In Iowa, the habits of the pure Italians, as regards breeding, honey-storing, etc., are much the best. In Cuba, and here in South Florida, high-grade hybrids do the best. An article would be required to cover these points. I prefer not trying to answer the other questions.

J. E. Pond—1. Early and late work, near enough to hive to give ample results. 2. A long article on queens is needed to answer understandingly. 3. Color is of no importance. 4. As stingless bees are desirable, the best dispositioned are desirable. 5. Bees are so nearly alike in size that but little can be done in that direction. 6. For myself, I should not wish to see the non-swarming variety. 7. Most of the varieties

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Alsike Clover	.70	1.25	3.00	5.75
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are hardy enough? 8. I have found the Italian, as a whole, to fill the bill better than any other variety, race or cross.

E. S. Lovesy—1 and 2. I select mainly for the first two qualifications. 3. The leather-color with me comes the nearest to the above requirements. 4, 5 and 7. Again the leather color suits me the best. 6. I run my bees by division in a way so that I am not troubled by any swarming propensities.

Eugene Secor—The ideal bee must be able to gather more honey from the same field than the present one, and if she does that I don't care whether she be black or yellow, large as a bumble-bee or small as house-fly. If she does what is required of her, of course she'll be hardy and prolific. She'll not swarm herself into poverty, or forget her proper functions.

J. A. Green—The ability to gather a large amount of honey, and if comb honey is the object, to store it in salable form, are by far the most important. I would place disposition next. After that, I would want bees that did not make swarming their chief aim. Hardiness and prolificness are very desirable. Color and size have little value in themselves, tho the former is of considerable use to the breeder.

Rev. M. Mahin—1. "Nothing succeeds like success." The ideal bee should be a successful honey-gatherer. 2. The ideal bee should be prolific, but prolificness can be excessive. 3. I like a bright golden color, if other good qualities are present. 4. Gentleness is a very desirable quality. 5. Size is a matter of little importance. Some colonies of small bees store more honey than some large ones. 6. The ideal bee does not swarm excessively. 7. This question answers itsel.

P. H. Elwood—I prefer to breed from those colonies producing year after year the largest quantities of good quality honey. The prolificness, color, size, swarming propensity and hardiness, suit me if the first qualification is all right. If not hardy they will not be strong enough to gather a large quantity of honey. The swarming propensity can be controlled. The disposition of such bees, as a rule, is no worse than the average. Extra-cross colonies can be blotted out.

S. T. Pettit—1. Generally one that does its best, but in the fall quits entirely when it cannot gather enough to meet current expenses. 2. I want a good layer, that knows enough to quit in the fall when there is not enough honey coming in to meet present demands. 3. The color that she happens to have when the good qualities are well developt. 4. To keep very quiet in winter, to fight moth-millers, to guard against robbers, to keep self-possest and quiet while under manipulation. 5. The Italian is, in my opinion, the ideal size for this country, except the length of its tongue. 6. The ideal bee will not swarm except under great pressure. 7. Most of our bees are hardy enough if handled rightly. Temperament helps. 8. A bee with a longer tongue—long enough so as to gather red clover honey.

Don't fail to mention the Bee Journal when writing advertisers.

Convention Notices.

Connecticut.—The fall meeting of the Connecticut Bee-Keepers' Association will be held at the Capitol at Hartford, Wednesday, Nov. 2, 1898, commencing at 10:30 a. m. Every member should make an extra effort to be present at this meeting.
Waterbury, Conn. MRS. W. E. RILEY, Sec.

Colorado.—The Colorado State Bee-Keepers' Association will hold their next annual convention probably some time in November, the exact date given later.
R. C. AIKIN, Pres., Loveland, Colo.
F. RAUCHFUSS, Sec., Elyria, Colo.

Ontario.—The annual meeting of the Ontario Bee-Keepers' Association will be held in Guelph, Dec. 6, 7 and 8, 1898. Owing to the Guelph Fat Stock Show, the Guelph Poultry and Pet Stock Show, and the Experimental Union meeting on the same dates, there will be a large meeting of bee-keepers, and each association will be a help to the other, as many are interested in all the different meetings. All are cordially invited to attend the meetings. W. COUSE, Sec.
Streetsville, Ont.

Illinois.—The Illinois State Bee-Keepers' Association will hold its 8th annual meeting at the State House in Springfield, Nov. 16 and 17, 1898. We will have the advantage of one fare and a third for the round trip—open rate—along with the Odd Fellows, whose meeting is the third Tuesday of November. Our Association has been petitioned by the Northern Illinois Bee-Keepers' Association to take the proper steps to secure the same foul brood law for our State as that of Wisconsin. Other matters of importance will come before the meeting, and we expect to have the usual good time that bee-keepers always have when they get together. Excellent board is secured at 25 cents per meal, and lodgings just as reasonable. All bee-keepers are invited. The one dollar for membership fee also entitles you to the American Bee Journal for one year.
Bradfordton, Ill. JAS. A. STONE, Sec.

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For a limited time we wish to make our readers a **special offer** on booklets on Bees, Poultry, Health, etc. Upon receipt of **75 cents** we will mail any **6** of the list below; and **for $1.25** we will mail the **whole dozen**.

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6. Hand-Book of Health, by Dr. Foote.. 25c
7. Kendall's Horse-Book 25c
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9. Ropp's Commercial Calculator........ 25c
10. Foul Brood, by Kohnke................ 10c
11. Silo and Silage, by Prof Cook.......... 25c
12. Bienen-Kultur, by Newman............ 40c

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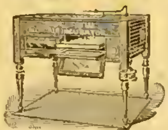
A Great Mistake



it would be to purchase an Incubator or Brooder without first getting a copy of our 148-page catalogue. It costs 6c. but is worth a dollar to you for the poultry information it contains, to say nothing of the pointers it gives you. Send for it at once.
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Wool Markets & Sheep, - - Chicago.
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IF you would like to see a picture and description of the finest honey-plant in the world, get the Bee-Keepers Review for July and September.

IF you would like to know where to find the best honey-location, to see it described with pen and picture, read the September Review

IF you are interested in knowing the methods of our best queen-breeders, and would enjoy seeing some fine engravings upon the subject of queen-rearing, one of them a double-page picture, get the Review for August.

IF you would like to learn how to so group and arrange your hives that they will occupy but little space, and yet give to each hive a distinctive location. see the article and diagram on this subject in the August Review.

IF you are interested in knowing what is going on among bee-keepers across the ocean, read "Notes from Foreign Bee-journals," in the Bee-keepers' Review.

IF you wish to see pointed out the errors and fallacious ideas that creep into current apicultural literature, get the Review and note the courage and ability with which Mr. R. L. Taylor conducts the Department of Criticism.

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The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only ONE book can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted, see postpaid prices given with the description of the books on this page. Following is the clubbing-list:

1.	Langstroth on the Honey-Bee	$2.00
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3.	Bee-Keeper's Guide	1.75
4.	Bees and Honey [Cloth bound]	1.65
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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Oct. 18.—Fancy grades of white comb honey sell freely at 13c, with good grades from 11 to 12½c, according to finish; ambers bring 8 to 10c, with dark, mixt and unclean, 7 to 8c. Extracted, white, 6 to 7c; ambers, 5 to 6c; buckwheat, 5c. Beeswax, 26 to 27c.

The market is active and nearly all consignments are sold soon after arrival.

R. A. BURNETT & CO.

San Francisco, Oct. 12.—White comb, 9½ to 10½c; amber, 7½ to 9c. Extracted, white, 6¾ to 7¼c.; light amber, 6 to 6½c. Beeswax, 24@27c

Stocks and offerings continue of very light volume, both of comb and extracted, and the market is showing firmness. Some comb of very superior quality has been lately landed on the market. Water white extracted is scarce.

St. Louis, Sept. 9.—Fancy white comb, 12 to 12½c.; A No. 1 white, 10 to 11c; No. 1 white, 9 to 10c.; dark and partially-filled from 5 to 8c. as to quality. Extracted in cases, No. 1 white, 6 to 6½c; No. 2, 5½c; amber, 5c; in barrels, No. 1 white, 5½c; amber, 4½ to 5c; dark, 4 to 4½c. Choice Beeswax, prime, 24c; choice, 24½c. At present there is a good demand for honey. WESTCOTT COM. CO.

Kansas City, Sept. 9.—Fancy white comb, 12@13c; No. 1, 11@12c; amber, 10@11c. Extracted, white, 5½@6c; amber, 5@5½c; dark, 4½@5c. Beeswax, 22@25c.

The receipts of comb honey are larger.

C. C. CLEMONS & CO.

Boston, Sept. 30.—Our honey market shows a decided firmer tone since our last. A few sales have been made at 15c for an extra fancy lot, while almost all sales ranging from A No. 1 to fancy now are made at 14c, while occasionally, something a little off, will bring as low as 12½ to 13c. We do not look to see any lower prices.

Extracted, Florida, in barrels, mostly 6c to 7c, with a good demand. Beeswax, slow sale at 26c for best. BLAKE, SCOTT & LEE.

Indianapolis, Oct. 3.—Fancy white comb honey, 12 to 12½c; No. 1, 10 to 11c. Demand fairly good. Tar-colored comb honey, 8 to 9c, with almost no demand. Clover and basswood extracted honey, 6½ to 7c. Beeswax, 25 to 27c.

WALTER S. POUDER.

Milwaukee, Oct. 18.—Fancy 1 pounds, 12½ to 13c; A No. 1, 12 to 12½c; No. 1, 11 to 12c; No. 2, 10 to 10½; mixt, amber and dark, 8 to 9c. Extracted, white, in barrels, kegs and pails, 6½ to 7c; dark, 5 to 5½c. Beeswax, 26 to 27c.

This market is in good condition for the best grades of honey, either comb or extracted. The receipts of the new crop are very fair, and some of very nice quality. The demand has been and continues to be very good, and values are firm on fancy grades and straight, uniform packing. A. V. BISHOP & CO.

Buffalo, Oct. 20.—This market is much improved in demand on all grades. Strictly fancy 1-pound comb, 13 to 14c; No. 1, 11 to 12c; dark, etc., 7 to 9c. Fancy extracted, 5 to 6c; dark, 4 to 4½c. Fancy beeswax, 27 to 28c; poor, etc., 20 to 25c. BATTERSON & CO.

Columbus, O., Oct. 18.—Receipts of comb honey are still very light and market is firm. Fancy white, 14 to 15c; No. 1, 12½ to 13c; No. 2, 10 to 12c; amber, 9 to 11c.

COLUMBUS COM. AND STORAGE CO.

New York, Oct. 22.—Receipts of comb honey are large, and there is quite a stock now on the market. While white is in good demand, buckwheat and mixt seem to be somewhat neglected, and quotation prices have to be shaded in order to sell in quantity lots: We quote:

Fancy white, 13 to 14c; No. 1 white, 11 to 12c; amber, 10c; mixt and buckwheat, 8 to 9c. Stocks of extracted are light of all kinds. Demand is good at following prices: White, 6 to 6½c; amber, 5½c; dark, 5c. Southern, in half barrels and barrels at from 55c to 60c a gallon. Beeswax dull at 26c.

HILDRETH BROS. & SEGELKEN.

Detroit, Oct. 20.—Honey in better demand and better prices as follows: Fancy white, 13@14c; No. 1, 12@13c; fancy dark and amber, 10@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

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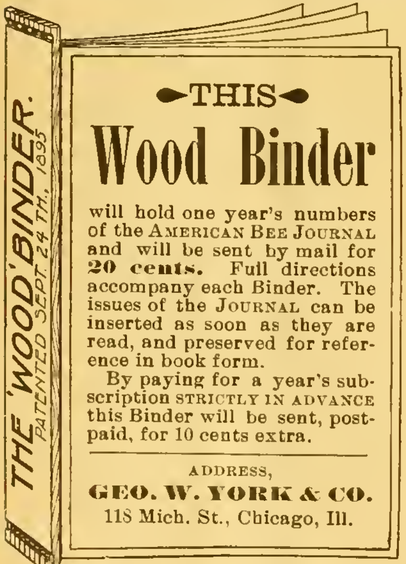

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38th Year. CHICAGO, ILL., NOVEMBER 3, 1898. No. 44.

CONTRIBUTED ARTICLES

Loose or Tight Bottom-Boards—The Union.

BY W. M. WHITNEY.

I have read Mr. C. P. Dadant's contribution on page 645, on the subject of tight and loose bottom-boards, purporting to be a criticism of something attributed to me in an item on page 594. While I would not presume to offer instruction or advice to any bee-keeper having the knowledge and experience which is well known to every novice in the business, who reads at all, that Mr. Dadant possesses, yet his article is based upon an assumption so far removed from the actual facts, that I feel constrained to defend myself by way of an explanation.

I made no issue between loose and tight bottom-boards, but simply stated that the methods of ventilation described were not applicable to the hives I use; and that for out-of-door wintering and for manipulation, as I have learned to do, I preferred them to any other with which I have become acquainted. There are other factors that enter into the calculation in forming my judgment respecting the hive, entirely independent of the matter of construction of the bottom-board. Were it left to me to choose, and were it practicable to make a double-walled hive thus, it might be that a loose bottom would be selected, mainly because the hive, as Mr. Dadant suggests, might be more readily cleared of dead bees, as well as of any foreign matter; yet, there has not been the least difficulty during the four years of my bee-experience in cleaning my hives, without the trouble of transferring.

My hives are double-walled to the top of the brood-chamber, having the air-space filled with some light, dry, porous substance, and having the second story single wall of thin stuff, and protected by a gable cover having plenty of air-space. They are not more cumbersome to handle than the two-story Langstroth; in fact, I find no difficulty in handling them during swarming-time. Queens being all clipt, when a swarm emerges, the parent hive is removed on a sled, and an empty one placed on the old stand.

Several of my hives stand in the sun, without a particle of protection from its rays, and while these colonies are among the strongest in the apiary, there has been scarcely a day during the heat of the summer that they have shown the least uneasiness because of the heat, or manifested a desire to hang out; which condition, I believe, is due to the fact that the inside hive-body is protected from the heat of the sun by the outer wall, and a circulation is kept up by ventilators in the gable of the covers.

E-KEEPERS SUPPLIES
COUNTY

Exhibits of E. Kretchmer and Douglas County, Nebr., in the Apiary Building at the Omaha Exposition.

In regard to removing frames from the brood-chamber, referred to by Mr. Dadant, I have to say that I am using, largely, thick top-bar frames, which are spaced quite closely in early spring—not more than a flush 1¼ inches—and the removal of one frame in a 10-frame hive adds 1¼ inch space to be distributed among the remaining frames, which makes simply a wide bee-space, but will not cause the bees to thicken the comb, as I said in my former statement, providing they have a prolific queen, and there is surplus room given in the story above if needed. At least this is my experience.

This, and a chaff hive, are used almost exclusively in northern Ohio for out-of-door wintering, and are universally liked. Mine are the only hives of the kind in this locality, and while the season has been an extremely unfavorable one—one of the poorest known in this part of Illinois—my bees have not only most bountifully supplied themselves with winter stores, but have given me nearly 700 pounds of surplus, about equally divided between extracted and comb honey, while a neighbor, about 80 rods from me, theoretically "way up" in bee-keeping, with more colonies than I have, but in another kind of hive, has secured less than 30 pounds of surplus. But he does not take the "old reliable" American Bee Journal.

But it matters not what kind of hive one uses: as I said before, the time and manner of manipulation has a wonderful effect upon results, and no person should attempt to keep bees who is walking about asleep.

UNITED STATES BEE-KEEPERS' UNION—A SUGGESTION.

One other matter, which perhaps may seem presumptuous in me to refer to, as I am not a member of the United States Bee-Keepers' Union is, What is the surest method of increasing its membership? It has occurred to me that, if all county associations were made branches of the United States Union, and were governed by its constitution, contributing to its maintenance by the payment of dues or assessments, and were represented at its conventions by delegates, as many other organizations are conducted and supported, it would soon become a wonderful power for good to the bee-keepers of the United States. This is simply a suggestion, perhaps impracticable. Kankakee Co., Ill.

⁂

Introducing Virgin Queens to Nuclei.

On page 632, a Jamaica bee-keeper suggested that queen-breeders be requested to answer this question in the American Bee Journal:

"With what method of introducing virgin queens to nuclei are you the most successful? Also give the age of the queens."

The following responses have been received up to this time:

In reply to the question for queen-breeders, I will say this is about as good a plan as I have ever tried:

I have my queens hatcht in the West spiral cage. When the queen has been hatcht from one to 10 days, I roll in a piece of tissue or other paper sufficient "Good" candy to fill about one inch of the cage, and place the cage in the hive in such a way that the candy can't fall on the queen when nearly eaten out. By this plan the nucleus has been queenless 3 days or more. With this plan I have been very successful.

I might succeed better with the tobacco plan, but in the hand of a novice there would be danger of robbing; and then, I don't use tobacco, and of course don't allow my bees to indulge. W. J. FOREHAND.

Lowndes Co., Ark.

I have been very successful in introducing virgin queens to nuclei as follows: I use the introducing-cage, consisting of a wire cage ⅜x⅞x3¼ inches, and a tin cap ⅞ of an inch long that just fits inside the open end of the cage. This cap has a ¼-inch hole in the bottom, and is filled with candy that will take the bees about two days to eat out, when the queen will be liberated. The nucleus should be queenless at least a day before the virgin queen is caged, and if many days destroy the cells.

This method differs only from introducing laying queens in having the nucleus queenless a day or two while the laying queens are caged, as soon as the undesirable queen is removed.

I have used this cage successfully since 1883, and have introduced hundreds of virgin queens with little loss. I have no trouble introducing a queen a week old, but prefer one from 24 to 48 hours old. JAMES F. WOOD.

Worcester Co., Mass.

I will here outline the method, or several methods, which I have used quite successfully during the past season, for introducing virgin queens. It is not possible to give in a nutshell all the little kinks and hooks that are necessary to the best of success, but these will soon be acquired by the practical apiarist.

One method with which I have been especially pleased is Dr. Miller's "pulled queen method," as I call it. During the past season I have introduced somewhere around five or six hundred pulled queens, and have lost but very few when certain rules were observed. The rules are these:

The queens are not to be more than a few hours old, and the nucleus must be at least three days queenless. At all times, and when honey is not coming in very briskly, the nucleus should be queenless one or two days more, or the queen is liable to be balled as she grows older. It is a fact, the bees will accept one of these pulled queens when they have been queenless but a few hours, but the idea is not only to have them accept the queen, but to have the queen become a laying one. My experience says when the queen is given to the bees too soon they will invariably ball and kill her after the first two or three days.

For introducing virgin queens not more than three or four days old, I follow the same rules as for a laying queen. A colony that will accept a laying queen will accept a young virgin. To introduce a virgin 5 or 10 days old is quite another thing, and, to prove this for yourself, take a pulled queen and one of these oldish virgins and place them on the same comb at the same time, and you will find that the bees will promptly attack the older queen while the pulled queen will receive no attention whatever. To get the above results use bees which have been queenless for but three days.

To introduce these oldish virgin queens, I usually wait until the bees have capt queen-cells, then run a queen right in at the top of the hive. It is a good idea to roll her in honey first. *This work should be done in the evening, towards sundown.*

Another plan for introducing these queens is to wait until the nucleus is queenless for three or four days, and then proceed to introduce as you would a laying queen to a colony that has been queenless for a few hours, or whose queen has been just removed.

All the above directions are for colonies or nuclei in a normal condition, except that they are queenless, of course.

Huron Co., Ohio. H. G. QUIRIN.

CONVENTION PROCEEDINGS

UNITED STATES BEE-KEEPERS' UNION.

Report of the 29th Annual Convention Held at Omaha, Nebr., Sept. 13-15, 1898.

DR. A. B. MASON, SEC.

[Continued from page 675.]

FIRST DAY—EVENING SESSION.

The evening session was called to order by Pres. York, and opened with the singing of the "Bee-Keepers' Reunion Song."

Pres. York—The first paper is one by Mr. E. R. Root, of Ohio, on

Recent Progress in Apiculture.

E. R. Root—I have no regularly prepared paper. Not having had the time to prepare one, I thought I would simply give you some of my old rehash. I want to say in this connection that I was in hopes I should not be put on the program for any paper. I was rather of the opinion that a publisher should not come before the convention to discuss a subject. We want to have an opportunity of hearing from those who do not so often have the opportunity of being heard from.

At the meeting held in Lincoln, Nebr., I had a subject very similar to this; but I suppose Dr. Mason thought that the times had changed so much that we could discuss the same subject again.

THE PLAIN SECTION AND FENCE.

Some of you know what we have been doing in reference to plain sections. I wish to explain what the plain section is: It is simply a section which has the sides made of the same width throughout; in other words, it is a section without bee-ways. We called it the "no-bee-way" section for a time. I saw those sections in use in New York State a year or so ago, when I was through it. They were getting more money for honey in those sections, and those who were using them were very enthusiastic concerning them.

In order to make the use of these sections practicable, we have put something in to take the place of the bee-ways. If separators are used, then the separators have to have cleats upon them. I have a section here that I have tried to make into the form of a plain section, and you can see that it is perfectly straight around the edges, with no bee-ways. I have here a fence to illustrate what I mean by the separator having cleats upon it. The fence is made something after this nature, with cleats on both sides 2/12 inch thick, or it may be ⅛ inch thick. We put cleats on each side. That is supposed to be made up of slats placed about 3/16 inch apart. A series of these sections set down in the case, and then one of these fences, with cleats running down on either side, is put in. The sides of the section come opposite the cleats on the separator. If you nail a piece of wood on either side you make a perfectly tight box of it.

Ernest R. Root.

In this way we get rid of about 25 percent of the wood in the sections—making the separator that is a little more expensive, and putting the cleat on the separator. We have overcome the difficulty of having such a large case. We save about 25 percent of the room in the shipping-case; yet the sections hold as much honey as they did before. We also have the honey closer to the face of the box. When the honey is put in, the capping appears almost even with the box, and the section itself seems to be fuller.

I found in New York State that these sections would sell better. This year we happened to send to a commission house in Columbus about 1,500 pounds of comb honey, and in that was a case of the plain sections. We thought nothing about it until we got a letter from them saying that they had that case of sections, and had taken it around to their customers, supposing they were all the same, had taken a great many orders, and that they were very much disappointed when they found they were not all alike; that they would like to get a thousand cases of plain sections, as they would sell more readily. You understand that they did not know anything about the plain sections; it was simply that they were better looking, and they wanted a thousand cases of them. That is one of the recent developments that came up for this year. The advantages are that there is less wood and less weight in the shipping-case; the surplus wood is put on the separator itself.

Dr. Miller—Was that case of plain sections you speak of, square or oblong sections?

E. R. Root—Square. If it had been sent with oblong sections we would not have known whether the advantage was in the shape or in the style of the section. It must have been the appearance of the section itself that made the difference. Mr. S. T. Pettit, of Canada, has something similar, and he finds that with this freer communication he gets better-filled sections. The object is to get the sections filled on the outside row—to get them as well filled as those on the inside row of the super. With the fence we attempt to accomplish that, and I think the honey is going to be whiter, too. I shall show in the next number of our journal a photograph showing the honey in the ordinary plain section and also in the old style section, and you will note that that in the plain section is a good deal whiter.

Mr. Stilson—In regard to the shipment of those sections built on that style, is it necessary to put in a fence between the rows of sections in shipping?

E. R. Root—No, sir; we have had thousands of pounds shipt without anything between them whatever.

Mr. Stilson—About two weeks ago I saw a shipment of 2,000 pounds of honey, and about half of it was ruined by being shipt in that manner. When the cases were handled it broke the capping and ruined nearly the whole shipment.

E. R. Root—Was that in plain sections?

Mr. Stilson—Yes, sir.

E. R. Root—I have not found any cases where there was that trouble. The thickness of the cleats has quite a good deal to do with it. There is a possibility that it might in some instances do that. Did they put fences in the shipping-cases?

Mr. Stilson—No, sir; there was no separation whatever; it was just put in close together, and it masht down. It was just simply one mess of mush.

E. R. Root—I have been watching for things of that kind, but haven't found anything yet. If there is more than 2/12 inch of thickness, then I think there is almost sure to be the trouble you speak of.

Mr. Masters—Are the cases filled full of those sections?

E. R. Root—Yes, sir.

Mr. Masters—How do you get hold of the sections to get them out?

E. R. Root—Usually shipping-cases are made so that there is a "follower" in them at the back of the case. The cases are made so as to take several different sizes of sections. If there is any space left in the case it is taken up by means of the follower. Back of that, if there is any space, pieces of newspaper may be folded and placed to fill the space and act as a sort of cushion. The newspaper is rolled up and put down behind the follower in the shipping-case. That protects the honey from getting jammed.

Dr. Miller—Do you consider it necessary to have separators in shipping-cases?

E. R. Root—No. We thought at one time it was necessary; but now I do not think it is. They can be put in or not, as one sees fit.

Mr. Stilson—Have you ever used the plain sections with a fence or separator, shut tight both top and bottom, and a hole in the bottom of the section for the bees to enter?

E. R. Root—I never have; no, sir.

Mr. Stilson—I saw some a little while ago. It was a surprise to me, the manner in which they were filled. I had never seen them used until this year. They were filled clear down to the bottom, and every corner was filled all the way through. The auger-hole was filled and capt clear down.

Mr. Stilson exhibited some of the sections filled with honey, which showed the conditions he spoke of.

E. R. Root—Speaking about getting the sections full—the claim was made earlier in the season that the plain sections would be filled out better than the ordinary. So far as I have seen they are. I am inclined to think that the greatest point in that is to get the sheets of foundation large enough. It is very necessary to have the starters go clear across. I am told by Mr. Danzenbaker that that is the reason he gets his sections filled out so nicely. I have also been consulting with quite a number of others, and I find that the matter of having the foundation go clear out to the sides of the section does away with pop-holes.

Dr. Miller—Mr. Danzenbaker insists it is better not to have the foundation go clear to the bottom.

E. R. Root—I meant to say that the foundation does not go clear to the bottom, but clear to the sides.

Dr. Miller—Will you please tell us what you use where Mr. Pettit has his divider?

E. R. Root—We have a fence.

Dr. Miller—And of course you have a wedge in there.

E. R. Root—Yes, sir.

Mr. Masters—With a 1/6-inch bee-space?

E. R. Root—The wedge increases it, so it makes very nearly ¼ inch.

Dr. Miller—Is it not possible to have both sides wedged?

E. R. Root—It would be possible, perhaps; only in the ordinary 8-frame hive there is not enough room for the rows of sections and the fences. The wedges are about as thin as they can be now.

Dr. Miller—Mr. Pettit's idea is to have the outside filled with bees. There is another point that just came to me that may be of some advantage—that point is this: With this extra number of bees, if Mr. Aspinwall's idea is correct, that swarming may be prevented, there may be some advantage in having the extra bees on the outside.

E. R. Root—The idea was to get the outside rows as nicely filled as the center. He does it by having a great number of bees on the outside.

Dr. Miller—Another advantage that I happened to learn is that of putting the wedges in along with the fence. I do not know yet whether I like the fences, but I do like that one point, that the wedge can be more easily put in with the fence than it can with the plain follower, and very much more easily pulled out.

THE DEEP CELL OR DRAWN FOUNDATION.

E. R. Root—I have here in my hand a piece of what we call drawn foundation. The base of natural comb is 3/1000 of an inch thick. We have got this down now so that it is pretty near the same thing. It is a very expensive article to make; it has to be made very slowly. The sample that we made last season had flat bases—flat bottoms, like the ordinary flat-bottomed foundation, but we found that the bees would take it, and in their effort to make the base natural would plug in a lot of wax in the corners. They would thicken the foundation and make it heavy. Sometimes in the rush of the season they would not do it. Then Mr. Weed went to work and made the bases natural, and that seemed to eliminate the trouble. Some seasons the bees will enter that immediately and draw it out into comb and fill it; and other seasons they will take the ordinary foundation as quickly as they will this.

Dr. Miller—In what seasons do they make the discrimination?

E. R. Root—If the honey-flow was coming in rapidly they would take the ordinary foundation as readily as they would this. If the honey was coming in slowly they would take the drawn foundation in preference.

The third stage that Mr. Weed is working on now is something in the nature of a cross between drawn foundation and common foundation. His idea is to make the foundation as thin as the bees make it, 3/1000-inch thick. That is about the thickness of the ordinary bee-journal paper. We want to approach that thickness as nearly as possible, because we learn that the bees very rarely thin the base of the foundation. Whatever surplus wax you put in there goes for naught. If the foundation can be made as thin as the bees make it, we have accomplisht considerable. [Mr. Root then exhibited specimens of the foundation referred to.] The walls are made in this way to stiffen the foundation, and also to give the bees a surplus of wax. It can be made thus more rapidly, and can approximate in price the price of ordinary foundation. When we accomplish that it will be a long step in advance. If we can give the bees a little encouragement by deepening the walls of the foundation, it will often start them going.

I have here a specimen of foundation with very shallow walls. The foundation, while it might be sold for a little more per pound, would be cheaper per square foot, and it would be less liable to sag, because the walls would keep it from sagging. It is also an advantage in pulling the foundation off the rolls. In pulling ordinary foundation off of the rolls, it has a tendency to stretch it. This foundation pulls off much more easily.

This foundation runs about 12 feet to the pound. Ordinary foundation runs about 7 or 8 feet to the pound. You can see the saving there; it will be much cheaper. And I believe that to make foundation with deeper walls is going to induce the bees to go into it more readily than with ordinary foundation.

QUEEN-REARING—THE DOOLITTLE METHOD.

E. R. Root—I will now pass to the subject of queen-rearing. Nearly all queen-breeders are using the Doolittle method, or something like it. If you know what the Doolittle process of producing cell-cups is, you know it is simply to take a round piece of wood and dip it in wax several times until the wax comes off in the form of a queen-cell. A row of those is fastened on a stick, and that is put in the center of a brood-frame; then the cells are grafted with larvæ and filled with royal jelly—I should say the royal jelly is put in and then the larvæ, and then the cells are put into a hive that is going to supersede the queen. The larvæ are one or two days old. After the cell-cups are put on the stick and fastened to a brood-frame, it is put into the hive of a colony that is going to supersede the queen.

How do we know that they are going to supersede the queen? As we go through the apiary we find a colony that has an old queen and has some queen cells started. That indicates that the bees are probably going to supersede the queen. We destroy all cells in that hive and put in one of these Doolittle artificial cell cup frames. If it is left in there during the honey season the bees will fill it out; if it is not during the honey season we gradually feed until the cells are filled clear down. That seems like a great deal of work, but it is a very short process, and the result is far superior queens. Just a little while ago I went through the apiary and lookt at some of the "peanut" queens, and I was surprised to find how large and how prolific they were. It seems to me that they must be queens of long life. The thought is this, that queens that have been on a journey for a time are shorter-lived than those which one rears. Suppose that is true, does it not stand to reason that bee-keepers should learn the art of queen-rearing? A great deal depends on good queens. With a good queen you can get a good, strong colony.

Mr. Rauchfuss—Won't you be so kind as to explain the system of rearing queens when you produce extracted honey? There is a difference under the Doolittle plan.

E. R. Root—I do not know that I understand your question.

Mr. Rauchfuss—I mean the method of rearing queens when you are producing extracted honey. Instead of looking up colonies that are going to supersede their queens, we simply hang a couple frames of brood up above. That will make the bees start queen-cells on those two frames. After they have started those queen-cells then we are getting ready to have our cell-cups on hand and put them right on those frames, breaking out the cells that have been naturally started. In that way we get about six cells, on the average, out of the 12. We leave them in there until the proper time comes to take them out and put them in the cages. We put them on a strong colony until they are hatcht; then go to work with your pocket-knife and cut a hole in the extracting-case or super, making a hole for the queen to go out and get mated. She will commence laying, and whenever we feel disposed to change the queen we can take out the queen-excluder and the new queen will go down, and finally the old queen will disappear. That is a very easy and convenient way of requeening your apiary. It is a very satisfactory and a very cheap way of rearing queens. It doesn't interfere with the work of the colony—they keep right on filling the frames.

E. R. Root—That is an adaptation of the Doolittle method. I was stating a few minutes ago that good, prolific queens are a very important thing. We want queens that can produce a large number of eggs and get a strong colony. Some of you know something about the methods by which swarming may be controlled. Some time ago I went through Mr. Coggshall's apiaries in New York. He has 13 apiaries. He does not keep men at the out-yards; he lets the swarms go. The neighbors said he lost about half of his bees there. I spoke to him about it, and he said he could produce bees at a cost of 50 cents a colony. Suppose he can do that and then produce big crops of honey; isn't there a better way by which he can keep those colonies? I have been misunderstood a great deal in regard to large colonies. At our out-yard we have no men at all. I take care of those bees myself, and I do not give them very much time, either. There is no one there at all to look after them, but when they are managed properly they have no swarms, or so few that it doesn't amount to anything. Those colonies are tiered up one and two stories high. We want queens that are going to fill those brood-chambers full of brood; there will often be 12 to 16 frames of brood. We have had a good many with 12 to 15 frames. We put on the super as the honey season draws on, the brood will hatch out, and the probabilities are they will fill the upper story with extracted honey, and that will be capt over; the comb honey super will also be filled out. I have had as many as two or three stories filled out on top of that. If they were to swarm out, the colony would be reduced and the whole thing left weak. Honey is low enough in its price. We should do something if we can to control the swarming propensities and keep the colonies strong and full. There are other methods by which swarming can be controlled, but that is the most practicable method. Mr. Dadant has very little swarming—I think about 2 percent; and sometimes he doesn't have even that. He gets more honey, and it is less trouble to manage the bees than in the ordinary way. I don't say that all localities will stand such procedure, but in a good many localities it will work very nicely. I presented this method at the convention at Philadelphia about ten days ago, and a good many said they had tried it and had got good crops of honey when their neighbors didn't get any. The plan is simply to have large colonies, very large colonies.

Mr. Rauchfuss—Doesn't a good deal depend upon the strain of bees?

E. R. Root—We have a good many strains of bees; some imported, and a good many hybrids.

A. I. Root—Mrs. Acklin has had good success in rearing queens by the Doolittle method. We would like to hear what she has to say about it.

Mrs. Acklin—We have been rearing queens by the Doolittle method for four or five years; in fact, we have always reared our queens in that way ever since we commenced queen-rearing. I take a queen out of the colony and leave it three or four days, and then build a string of cups and put in. This summer one time I made a string of 17 cups, and 15 of them were accepted. Another time Mr. Root was up there, and then I think I made 14 cups and 13 of them were accepted. That is the way we have run all summer. I have been using the same colony all summer for rearing queens. We have put in fresh brood all the time, taking the frames of brood and larvæ and putting them in some other colony until they are sealed over, and then putting them into the queen-rearing colony, and in that way we have kept the colony stockt with young bees. We have reared a good many queens in that way. We have just kept that colony rearing queens all the time. Some bee-keepers might not think it advisable to do that. We have had queen-cells half a finger length long. I agree with Mr. Root in saying, that they are very prolific queens.

A. I. Root—Have you tried rearing queens above with the old queen left in the hive?

Mrs. Acklin—Not this summer—not for the last two seasons. I prefer to have them in the lower story, as I think it is more satisfactory.

A. I. Root—When I started the idea of queens for a dollar, how the bee-journals pitcht into me and abused me! They bore down on me hard, some of them seeming to think I ought to be in the insane asylum. I almost felt guilty myself, they came down on me so hard. I began to think I had made a big blunder. We advertised the names of those who agreed to furnish untested queens for a dollar, and kept on until by and by people began to discover that dollar queens were not altogether "Cheap John," after all; and at some of the conventions people began to speak of the big crops of honey they had got with dollar queens. The end of my story is this: Our good friend W. Z. Hutchinson suggested in a recent journal that he didn't know but good queens could be reared for 25 cents. I haven't heard anybody abuse him at all.

Dr. Miller—Wasn't that virgin queens?

A. I. Root—I don't think it was. Queens used to sell for $4 or $5. Our advocating queens for a dollar rather spoiled the trade of those who had been getting high prices. I don't know but that was why we were abused. I remember some one said for my encouragement when I was getting it on every side: "Mr. Root, when you want to find the best apple-tree in an orchard, when there isn't an apple on it, look for the tree that has the most clubs lodged in the top." But I am glad that the "clubbing system" is not so much in style any more. We are getting a little more charity and a little more respect for each other. Now I hardly expect that good queens will be reared for 25 cents; but good queens can be reared cheaply. I wish Mr. Doolittle could be here to hear these expressions of approval. Our apiarists have shown me some of the finest queens I ever saw in my life that have been reared by that method. It is going to produce just as good queens as we ever got by any process, and a good deal cheaper than they were reared before.

Mr. Stilson—Before this thing of new ideas in the apiary is past entirely, I wish to say this: Out at the Exposition grounds you will find many of these very appliances that Mr. E. R. Root has been describing in his talk. You will have many object lessons there, and you can learn a great deal from them.

Dr. Miller—It may not be out of place to mention at least one of the principles that I think very largely controls this matter of rearing queens under certain circumstances, with the plan that Mr. Rauchfuss speaks of as being the better. That plan I believe can be applied also in the plan that Mr. Root gives. Here I think is the fact: If no eggs are being laid for brood, there seems to be a general impression on the part of the bees that there is something in the line of queenlessness. In many cases they will start to rearing queens, especially if they have an old queen. This summer I had cases in which to put the brood into the second story, and in the first story I put the queen with some combs. The queen was shut off from the second story. I did that with six colonies. In two of the six colonies I found queen-cells started in the upper story, and eggs in them, showing their feeling of queenlessness. Even if there is a first-class laying queen below, the bees will go on and complete the queen-cells above. The more they are isolated the more in earnest they will be about completing the queen-cells. It is not necessary to have extracting-combs; you may take sections and put the cells in them, with your Doolittle cups. If you take two stories of brood and lay a cloth between them with no excluder, so the queen would not feel comfortable about going up above, the queen-cells will be started there. Wherever there is brood with no queen, there is where the queen cells would be started. One year I had a number of combs that I wanted to keep away from the moths, and I put three stories of those empty combs over a colony of bees. I thought perhaps the bees would not go up to take care of the upper story, and thought I would give them an inducement. I put a frame with brood in the fourth story—one story at the bottom holding the colony, then three stories with empty combs, and in the upper story one frame with brood. I left them a month or more, paying no attention to them at all, and then was surprised to find that there was a queen laying in the upper story. There was an opening in the hive, and the young queen had gone out and been fertilized, and had started business on her own account. There was an old colony down below, and the new colony above. Mr. Doolittle refers to that in his book. Whether he had thought of it before I do not know; but the incident, related, I think, in Gleanings, was the first reported case of a queen being reared in the same hive with an old queen. The point is this, that you want the bees to be separated enough from the old queen to feel that they have no queen.

BEES SWARMING OUT.

Mr. Masters—Why should a colony of bees swarm out when they have no queen-cells started? I have had that happen more than once, in cases where there were no queen-cells for three or four days.

Dr. Miller—They had no queen-cell for three or four days? Had you destroyed the cells?

Mr. Masters—No; they swarmed without having any queen-cells.

A. I. Root—Italians will do that.

Dr. Miller—When the swarm came was that the first time they had swarmed?

Mr. Masters—The first time.

Dr. Miller—There was no start toward queen-cells, at all?

Mr. Masters—No start toward queen-cells, at all.

Dr. Miller—Such cases have been reported. I have always been just a little skeptical as to whether in those cases the bees had not made some attempt to swarm and been thwarted in it.

Mr. Masters—I hadn't known of it. I didn't want them to swarm.

Dr. Miller—If bees start to swarm and are thwarted in it, the more they are thwarted the more in earnest they become in trying to swarm. I had one colony that wanted to swarm, and I took away two or three frames of brood and gave them foundation, so as to stop their inclination to swarm, but they swarmed again. Then I took away all their brood, and left them nothing but foundation. They put one queen-cell with an egg in it on the empty foundation—that was the only brood there was in the hive, and then they swarmed again and laid down on the ground in front of the hive (the queen was clipt), and they wouldn't go into the hive. They would swarm; they wouldn't be thwarted, and I gave it up. I can't explain it. Bees will do a hundred and one things that nobody can explain. One colony will do one thing and another colony will do another thing.

Mr. Masters—In this colony the hive was full of brood and eggs. There were several frames that were full of eggs and young larvæ. There were about four frames that had capt brood, and the other four frames I should say had brood and eggs on one side. I never could see why they swarmed. When they swarmed I concluded I would open the hive and go in and destroy all the cells but one, but I couldn't find a cell. I went through it the next day and couldn't find a cell. I went through the hive on the fourth day and found quite a number of cells, and they reared two or three queens and swarmed twice more afterwards. They were black bees.

Mr. DeLong—I have had a number of colonies myself that would swarm under those circumstances, and I believe I have solved the problem of why they swarmed; and it was simply this: I think they just wanted to swarm. [Laughter.]

Dr. Mason—I have had a great many colonies swarm without making any preparation whatever for rearing queens. This year about 20 percent of my colonies swarmed. The first one was a strong, pure Italian colony that made no preparation whatever for rearing a queen. Dr. Miller speaks of workers laying eggs above. Mr. Taylor says the same, too, and that it is not a fertile egg that is laid above. I do not know how it happened, but I reared two queens in the second story when there was no queen there and no comb there that had had eggs in it. There were only those two eggs that I found in the upper story; they both reared queens.

Mrs. Acklin—We have had cases this summer of that kind, with no eggs in the hive at all.

Mr. Danzenbaker—People think that bees can't be controlled in swarming, I hold that the natural reason for their swarming is to increase. It is as natural for them to swarm as it is for a grape-vine to run, or for anything to increase. Can the swarming be controlled? I think we can do it. The way I have managed bees I have furnisht the hives and taken all the honey they could store in a certain time, for the hives. I do not want swarms. I have managed 110 colonies, and have had only two swarms out of them, and I think those two swarmed because I did not quite keep up with them. I put on supers and got them to start work as quick as I could, gave them plenty of ventilation, and watcht to see if they started queen-cells. As soon as I saw the cups with eggs in them I didn't wait any longer, but went to work to change the condition of the hive. I contend that a colony will not swarm without there is brood there—hatching brood and larvæ—brood in all stages, and plenty of bees. I would leave one comb of brood and put in only starters in the brood-frames, and take the sections that were already on the hive, and that were half full, and shake off the bees that were there and put them to work on starters, and give them plenty of room. They don't swarm; no danger of it at all. Some times, if I had two colonies standing together I would double them up; sometimes I would make three into two, and take a super from one that was very strong and put it over one that was not so strong. In that way I have managed to control swarming. I have stackt three tiers over one hive, and after awhile take and shake the bees down in front of the hive—add bees to one hive or another, as many as I wanted. I have had them working two and three tiers high in the supers. I have had some correspondence with Mr. Mendleson, of California, who said he had supers built up 5, 6 or 7 high. I feel that I can safely control swarming.

Dr. Miller—Will you tell us what you think the advantages of that plan are over natural swarming?

Mr. Danzenbaker—When I have bees two miles away I don't want them to swarm. The old bees are the field-workers, and I didn't want them to swarm. I was to have all the honey they produced by May 20. I had 14 hives in one place, and from them I got 900 pounds of section honey. They didn't swarm. I didn't have anybody there to watch them at all. I knew by the condition of the hives that they hadn't swarmed. The queens were clipt; and I changed all those queens and gave them new, young queens.

Mr. Rauchfuss—Didn't you get considerable drone-comb?

Mr. Danzenbaker—No, sir. I advocate the idea that if you give the bees some drone-comb to start with that they have sense enough to know that they have enough. They want about 800 cubic inches for workers; they must have it. Give them one drone-comb to start, and they will hardly build any more. Drone-combs that have honey in them do just as well. I don't give full sheets of foundation in the brood-nests; the bees will bring it down.

E. R. Root—Isn't that method the same as Mr. Hutchinson's—that is, the idea of putting the bees on mere starters?

Mr. Danzenbaker—Yes, sir. I got the idea first from Mr. Hutchinson's book, "Advanced Bee-Culture." If you will take it and read it, and practice it, I think you will like it. I am more indebted to Mr. Hutchinson for that book than to any other source, and I succeed with it.

Dr. Mason—What do you do with brood-combs when you take them away?

Mr. Danzenbaker—I want to rear all the bees I can until the white honey-flow is ready. I swap and exchange from one hive to another until I get them all strong. Some will be stronger than others. The first one I discover starting queen-cells I take the brood away from it, making it weaker, and dividing it around. And I may say I never use an excluder unless I am going to catch a queen. I think I have found it makes a difference of 50 percent in comb honey to use an excluder, and I don't do it.

Dr. Mason—I believe it makes a difference of 50 percent in favor of extracted honey to use an excluder.

"Feeding Bees for Best Results" was the title of a paper that was to have been presented by W. Z. Hutchinson; but the Secretary read a letter from Mr. Hutchinson, excusing himself from the preparation of his paper on account of sickness.

The convention then adjourned until 9:30 a.m. the next day—Sept. 14.

[Continued next week.]

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Weight of Bees and Comb in 10-Frame Hives.

What is the weight of the bees and comb in a 10-frame dovetail hive? I have empty hives I can weigh, but no combs. I wish to weigh my colonies now to see if they have the 30 pounds of honey.
S. C.

I don't know. I have at different times weighed combs, but I don't remember what they weighed, and I don't know that it would serve your purpose very well if I could tell you. When the honey is all eaten out of combs there's a big difference in their weight. Some will weigh four times as much as others and yet both be free of honey. A comb may owe its weight largely to the pollen that's in it. While that pollen is of much more value than most bee-keepers' suppose, it cannot take the place of honey for wintering, and bees will starve, leaving plenty of pollen in the hive. An old comb is much heavier than a new one. Taking all these things into consideration, it is not hard to see that two hives with their contents may weigh exactly the same, and yet one have enough honey for wintering while the other will allow the bees to starve.

Perhaps, however, I can help you out to some extent. Taking into account the possibility of old combs and much pollen, I hardly feel safe to have an 8-frame hive with its contents weigh less than about 50 pounds. If there is a little pollen in the hive and the combs are new, that will allow the bees more honey than they need, but it will not be wasted, and in the spring there seems a real advantage in having a good supply of honey. That means 50 pounds for hive, cover, bottom-board and all. A 10-frame hive should probably weigh somewhere from 55 to 60 pounds.

Feeding Bees for Winter, Etc.

1. In feeding bees which would you prefer, sugar or extracted honey, for the benefit of the bees?

2. Count the sugar at five cents a pound, at what price would it bring the honey to be about equal in price for feeding?

3. In this locality the mercury goes down to 36°, which is about the lowest. Would it make any difference in feeding sugar or honey in warm or cold climates? I mean for those who winter their bees in double-walled hives on the summer stands, well packt.

4. Will you describe the Hill's device? What is the length of the cross pieces, how far are they put apart, and are they straight pieces? What is the size of each piece? Do you recommend it, or have you something better?

5. Will a colony of bees winter as well on as many combs as they occupy, as they will if the hive is full of comb? Ought each hive to be full of combs and bees to winter well?
MICHIGAN.

ANSWERS.—1. If it's a question between sugar and honey of best quality stored by the bees sufficiently early in the season, I think I'd take the honey.

2. I think five pounds of sugar and two pounds of water will make a syrup about equal to honey for feeding. At five cents a pound for sugar that would make the syrup cost 3 4/7 cents a pound.

3. I don't know that there would be any difference.

4. I never used a Hill's device, and can only describe it from memory, so I'll not warrant an accurate description. Take four pieces of wood eight inches long, ⅞ inch wide, and ⅜ inch thick. Let them be sawed curving, say having the curve of the staves in a miniature barrel. Lay the four pieces on a table with the hollow side up, each piece 3¼ inches from its neighbor, and nail upon them a piece 12x⅞x¼. Lay this

on top of the frames with the hollow side next the bees and put the quilt over it.

When using quilts, as I did years ago, the bees always built bur-combs enough over the combs to allow free passage without the Hill's device. Since using flat board covers, there is no need of anything of the kind, for there is a bee-space between the frames and cover.

5. If the bees occupy a certain number of combs, say six, there is no need of any more combs in the hive through the winter, unless it be to hold honey. But if the hive is large enough to hold more than six combs, it is better to have the empty space filled with something, or else shut off by a division-board. At one time it was recommended to take out some of the combs for winter. At present I think nearly every one leaves the same number of frames in winter as in summer, that is, 8 frames in an 8-frame hive, 10 frames in a 10-frame hive.

A Beginner's Questions.

I bought a colony of Italian bees in a 9-frame hive. They have done very well so far. I took out 60 sections of honey up to Aug. 8. So far I have found no queen-cells so I divided the bees, putting three frames and the queen in a new hive with four frames of foundation. They went to work at once.

1. Did I do right in dividing them?
2. Had I better put the two other frames in the new hive and feed them so that they can fill the frames?
3. Is a warm barn a good place to put bees for winter? They are in double-walled hives.
4. Are 80 sections, 15 pounds of extracted, and enough to winter on, good work for one colony?
5. Is it well to diminish the size of hive-entrances in winter?
6. Once in a while I see a bumble-bee enter the hive. Sometimes the bees interfere with it, and sometimes they allow it to enter. Will this be any harm to the bees? If so, how can I prevent it?

NEW YORK.

ANSWERS.—1. That depends on circumstances, the season, etc. If you were anxious for increase perhaps it was the best thing.

2. You should manage in some way to make sure they have enough stores for winter, if they have not made full provision themselves.

3. It is not generally considered a very good place. The trouble is that when a warm spell comes the bees don't get warmed up enough to fly before the warm spell is over.

4. Yes, indeed. Don't expect to average anything like that amount when you get to 50 or 100 colonies, or you may be sorely disappointed.

5. That depends on the size in summer. If you have the entrance as large as some do in summer, better bring it down to ⅜ or ½ inch the whole width of the hive.

6. Don't worry about the matter. The bumble-bee will get the worst of it.

Salt on Cellar Floor—Survival of Fittest.

1. Would you advise putting salt on the floor of the bee-cellar? If so, how much? It has a purifying effect on the air if sprinkled on a carpet in a room.

2. W. A. Varian says on page 564 that by uniting swarms the best queen survives. Now, what I want to know is this: When a colony swarms, can I cut out queen-cells and hatch them in a queen-nursery, *a la* Alley, and when they are hatcht turn them all in together and give the survivor to the colony? If you read the article you will know better what I mean. You see I am trying to go Varian "one better."

WISCONSIN.

ANSWERS.—1. I wouldn't advise salt on cellar floor. If it is an earth floor, it will be muddy, and I don't know any good to sprinkle it on a board floor. I would rather use lime.

2. I'd rather not answer. Still, rather than to be sent to my seat in disgrace, I'll try to make some kind of an answer. Mr. Varian is on the right track. He is not entirely correct, however, in one respect. He thinks when two virgins or two laying queens get into the same hive by the uniting of the two colonies, the stronger and more active will survive in all cases, but if a virgin and a laying queen are thus thrown together, the laying queen will survive. In both of the cases mentioned he will probably find exceptions. If a strong colony should be united with a weak one having a stronger queen, the stronger queen might be killed, and there might be other exceptions with no apparent reason. With a laying and a virgin queen thrown together, the exceptions might be still more frequent. If the laying queen should be pretty old, especially at the close or near the close of the harvest, she would stand a fair chance of being set aside for the younger one. Still the general rule will hold.

Yes, I'm inclined to think your plan would work all right, and you would have a more severe selection than by merely throwing two queens together. But it would be a good deal of trouble. Possibly you'd like to try the plan I follow, which I think does fairly well, and is little trouble. Instead of giving a single cell to a nucleus or a colony, I give four, five or more, if good cells are plenty (and my cells are always reared in strong colonies.) If the first one of these that emerges is allowed to go around and destroy all the rest in their cells, then there is little choice in the matter; but quite commonly a plurality of queens is allowed to emerge, and the survival of the fittest follows. Besides, if only a single cell is given, it too often happens that it may contain a dead larva, or one in some way defective.

Cellar-Wintering with Bottomless Hives.

I have run against a problem too thick for me to extract. My cellar is overrun with mice; they have holes running down from the outside of the walls, and when snow comes the field-mice flock to the premises and are a nuisance in spite of cats and traps. I have been searching my "A B C" and fail to find what I want. If I remove the bottom from the hive when putting the bees into the cellar, would the mice bother them? I could leave the bottoms on, and leave a large entrance open, but then the mice could get in if the bees allowed them to. I'd like to cellar them with no hive-bottoms if it were safe.

"IOWA JOE."

ANSWER.—I doubt if you can manage to leave the bottoms all off with plenty of mice in the cellar. Of course you might hang up the hives, but that would be much trouble. You might put them on benches or boards, having these resting on posts surmounted with reverst milk-pans, but that would also be troublesome. Perhaps you might like the plan I follow: The floors are on the hives, the entrance being 12x2 inches, and the entrance is closed by wire-cloth with meshes three to the inch. That allows plenty of room for bees to pass through, but keeps out mice.

Using this Year's Sections with Foundation Next Year—Supers on Hives in Winter.

1. I have five supers that are on the hives. The bees have glued the sections together and didn't work in them at all. There is foundation in them. Can I keep them as they come off, and put them on next year? The honey-flow has stopt.

2. When you use cushions or quilts, do you leave a super on in winter?

KANSAS.

ANSWERS.—1. That depends on the condition of the foundation. In some places, when foundation in sections is left in the care of the bees till very late in the season, they will put so much propolis on it that it is not fit to use again. If thus varnisht over with propolis, you better not use it again, but if it looks nice and fresh, it will be all right to use it next season. Some bee-keepers make the mistake of leaving sections on all the season when bees are not storing anything. It may be all right to put sections on in advance of the white honey harvest, for you may not know exactly when it will begin, and it is better for the bees to have it a little in advance of their actual needs, but when you find that you are to have no surplus from the white honey harvest, don't leave the sections thinking they will be all ready for a later flow that may come in a few weeks, but take off all sections, and then if a later flow comes that you want to catch in the sections, put them on again.

2. Any way so there is room for the cushion. If the hive has a cover deep enough to contain the cushion, that's all that is necessary. If you use flat covers, then you must have a super, hive-body, or something of the kind to contain the cushion. But don't think of leaving on the hive over winter a super containing sections, if you intend using the sections again.

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK. EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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EDITORIAL COMMENTS

Note.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

"Golden" Comb Honey Method.—Quite a number of our readers are asking for the first articles by Mr. J. A. Golden, describing his method of comb honey production, which were publisht in 1896. We were out of those numbers of the Bee Journal long ago, but we will republish the articles sometime during the winter—after Jan. 1—in good time so they can be used by those who so desire, another season.

◆

Newspaper Clippings referring to bees or honey we are always glad to get, even if we do not make use of them or acknowledge their receipt. Sometimes we find among them something that we can use in our columns. At any rate we will consider it a favor if our readers will be on the lookout for anything in their newspapers on the subject of bees or honey, and when found send us only the clipping, or a markt copy of the paper itself.

◆

Six Great Premium Offers will be found on page 699 of this number. This month and next will be a good time to work for new subscribers, especially as we will throw in the Bee Journal for the last three months of this year to all new one-dollar subscribers for 1899. This will be a great help to those who work to get the new readers. When you tell them they will get the American Bee Journal every week for 15 months, and all for only $1.00, they surely will accept. It ought to make soliciting for new readers very easy. That means 65 copies to the new subscriber for his dollar, and a choice of one of the six big premiums to you for your trouble.

◆

"Discussion" is the subject of a discussion by F. L. Thompson in the October Bee-Keepers' Review, and he hopes the discussion may be continued by others. He doubts the moral right of an editor to cut off *any* discussion he pleases, as it may be cut off at a point which will give one disputant an unfair advantage over the other. He says a discussion may run into a dispute, and a dispute into personalities, and the farther it goes the more delicate the task of the conscientious editor to bring it to a close, hence he may wish to do so as soon as possible; and suggests that instead of stopping short the discussion, the editor might suggest private argument first of all, and then condenst and *combined* last words.

It might be replied that private argument is still left to the controversialists, no matter when the discussion is stopt, and that it is somewhat doubtful whether last words can be so "combined" that neither one feels advantage is taken of him; and not very doubtful that the editor who shirks the responsibility of deciding when a discussion shall cease will have in his columns a good deal' of matter that his readers will not patiently endure.

Editor Hutchinson says, "So long as the original subject is kept in view, and each 'round' brings out *new* facts and ideas, and argument takes the place of dispute and personalities, I see no reason for closing a discussion." Probably no one will disagree with him in that, always providing the facts and ideas brought out are worth the room they are to occupy.

Mr. Thompson says that the immediate cause of his Review article was our "shutting off a discussion" in the American Bee Journal some months ago—a discussion on evolution, in which he apparently wisht to engage also.

We might say right here, whenever we think that to continue a discussion in this paper is simply to waste space and disgust our readers, we will very likely chop it off—that is, so long as *we* wield the "chopper" and pay for setting up the type. When some other chap has our job he can do as he pleases about this—just as we do.

You see, *we* are trying to run the American Bee Journal in the interest of *all* who wish to get practical information on bee-keeping—those who pay their money for that purpose; and if in so doing a *few* get offended at our way of doing things, they'll simply have to seek other channels in which to empty their useless discussions.

◆

Reading the Bee-Papers.—Mr. R. C. Aikin, in his series of articles on "Experience and Its Lessons," in the Progressive Bee-Keeper, wrote this paragraph:

> "Why will even men who take and read one or more of the journals, buy frame hives and then put bees in, and neither see that the combs are built so as to be movable, nor ever try to move them? I can understand why an intelligent and practical apiarist will use some hive or other appliance because he has come into possession of such, and is just doing the best he can until a proper time comes to make a change; but it seems almost past comprehension that intelligent people would buy hives and then simply disregard every feature of the hive that made it better than a box costing a few cents."

Mr. G. M. Doolittle, referring to this paragraph in the same number, commented as follows:

> "Mr. A. I am skeptical regarding those whom you say read bee-journals and yet hive their bees without having an eye as to the proper spacing of the frames, or even putting starters in either the frames or sections; then cutting the honey-combs out of the sections and putting it in crocks, etc. The part I am skeptical about lies in the assertion you make that they take and *read* one or more bee-journals. They may *take* one or more bee-papers, and treat their bees as you say they do, but I have never yet seen the man who is interested enough to read up on bees who uses hives and sections as you say they do. Why, bless your old heart, you can tell a man or woman who reads the bee-paper from one who does not, before you have had conversation with them five minutes, for all of the

old fogyism has vanisht as soon as they read a little, and intelligent bee-culture is stampt on them at once.

"And yet there are those who have kept bees for years who are opposed to you and me trying to extend the circulation of our bee-literature for fear we may raise up a new crop of bee-keepers to increase the supply of honey on the market, thus ruining the prices through an over production. My word for it, no ruining of our markets by an over-production of *intelligent* bee-keepers. Just what our bee-keeping industry is curst with to-day, is an over-production of would-be bee-keepers, who are as ignorant of the first principles of bee-keeping as a pig is of history. Educate this class, and then they will know what a frame hive is for, and that honey stored in nice sections is of more value in those sections than it can possibly be cut out and stored in crocks.

"Don't get discouraged Mr. A., but keep right on agitating and educating until all of the old fogyism has become a thing of the past."

Mr. Doolittle never wrote truer words than the foregoing. What is needed is more intelligence on the part of those who keep bees—more information regarding the profitable management of bees. And the way to get a large share of it is to read the bee-papers, and then practice the methods and suggestions given.

◆

Sloppy Apicultural Literature.—Editor Hutchinson, of the Bee-Keepers' Review, called for expressions of opinion on his "Department of Criticism," as conducted by Hon. R. L. Taylor. In the October issue a few of those sent in are publisht, all but one being unsigned. In one of the signatureless opinions we find these words:

> "Apicultural literature is very sloppy and needing a tonic......we need an antidote for the —— —— slush."

Well, now that's too bad. *We* never would have thought that the Bee-Keepers' Review was "sloppy" or "slushy." But perhaps that particular critic doesn't consider the Review "apicultural literature." We had supposed all along that it was, and especially when we read the following advertising paragraph written by its editor:

> "If you wish a bright, clean, clear-cut, sprightly, beautifully illustrated, go-ahead, up-to-date, really helpful, useful bee-journal, subscribe for the Bee-Keepers' Review."

Now, that sentence *might* be called "sloppy" with adjectives, but if "American Bee Journal" were substituted for "Bee-Keepers' Review" in it, *we* should say it was exactly right.

But then, *we* may be prejudiced in favor of our paper, even if it is thought to be "sloppy!"

◆

Sealing Jelly-Glasses.—J. W. Bannehr, in Gleanings, says: "In putting covers on jelly-glasses last year, some of which did not fit perfectly tight, we dipt a small brush in melted beeswax, waxt the edge of the glass, and put the cover on at once. This makes it perfectly air-tight."

* * *

White Comb Honey Wanted.—We are in the market for best white comb honey put up in 12 or 24 pound single-tier shipping-cases. We would like it to run about 11 and 22 pounds, respectively. If you have what you think will suit us, please write, saying how much you have, and at what price you will deliver it in Chicago. Address, George W. York & Co., 118 Michigan St., Chicago, Ill.

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for $1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at $1.00), and 10 cents extra.

◆

☞ See "Bee-Keeper's Guide" offer on page 684.

THE WEEKLY BUDGET

Dr. C. C. Miller says in Gleanings: "A new kink I saw at Omaha was tumblers of jelly with a coating of paraffine on top to keep it from molding. Beeswax will answer the same purpose."

Messrs. Stratton & Osborne, of Erie, Pa., are now advertising in this journal their Dandy Green Bone Cutters. We are informed that they manufacture the most extended line of bone cutters now offered to the public. Their machines range in capacity from a few pounds to 200 pounds an hour. Write for their new illustrated catalog which contains prices, etc. Please say that you saw their name in the American Bee Journal, when writing them.

The Mascotte Incubator and Lumber Co., of Bedford, Ohio, who are the manufacturers of the Mascotte incubators and brooders, are seeking a share of the public patronage on this line of machinery. To that end they place their advertisement in this issue of the American Bee Journal. These people come to us well recommended; they guarantee their machines to work exactly as recommended or they will refund the purchase price of the machines. This seems a very fair proposition. Please say you saw their name and address in this journal, when writing them.

Editor Hutchinson, of the Bee-Keepers' Review, gives this paragraph in his October number:

> "Bro. York gave me a warm welcome during the hour or two that I could stop while on my way home from the fairs. We went out and took dinner together at a restaurant, and he told me about the Omaha convention, and made me wish I had been there. In one thing he was disappointed, and that was in the number present. He thinks now that the best thing we can do is to meet when the G. A. R. folks have their annual encampment. We are then sure of low rates. Philadelphia will probably be the next place of meeting. The American Bee Journal is giving a very full report of the Omaha meeting."

Hon. R. L. Taylor, the Bee-Keepers' Review critic—in replying to Mr. Moore's little pleasantry on page 596 of this paper, gives this equally witty paragraph:

> "Tho I have no remembrance of criticising any one's rhetoric, he says that all will agree that my criticism of grammar and rhetoric are entirely out of place in a bee-paper; but he seems to be in a measure reconciled to it, for he says 'it is nice to understand Michigan rhetoric and know wherein it differs from that of the settled portions of the country.' I have a copy of an old Gazetteer which describes Michigan as lying largely under water the greater part of the year. Mr. Moore, no doubt, has drawn his geographical knowledge from some equally ancient source. I'll write some railroad office to have some modern literature sent him."

Mr. J. P. Lees, of Florida, we mentioned some time ago as having met with great misfortune, losing his all. Since then we have received this letter from him:

Stuart, Fla., Oct. 21, 1898.

Dear Friend:—I wish to thank you most sincerely for your contribution toward my assistance. I also wish you to thank Messrs. Judd & Monson, of North Dakota, for $2.00; and Blackburn Bros., of Iowa, for $1.00. These are all the donations I have received through any of the bee-papers. The fire left me in a sad plight. I have not been able to get a house nor furniture yet of any kind, but by the help of God, and with good health, I hope to soon.

Thanking you again for your kindness, I am,

Yours respectfully, J. P. Lees.

We hope there may be others that will, from their abundance, send something to Mr. Lees. If you can, do so at once, and thus help him "to get on his feet again."

* * *

Every Present Subscriber of the Bee Journal should be an agent for it, and get all other bee-keepers possible to subscribe for it. See 6 big offers on page 699.

BEEDOM BOILED DOWN

Badly Discouraged.—L'Abeille et sa Culture relates that the season has been so discouraging that some bee-keepers are destroying their bees rather than to feed them. One man having 29 colonies saved two of them that were good and took up the rest. From the 27 murdered colonies he obtained 47 pounds of honey, all told! $1.60 per colony invested for feed would have taken them through to another year with a chance of double that amount in one harvest.

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Facing Comb Honey.—"Friend Doolittle thinks some of us, when we throw bricks at his honey-facing doctrines, do not take space enough in saying that he neither advises nor practices facing cases with sections of higher quality than the body of the case. Thought I made that clear enough at the outset; but, as a comrade desires it, I will cheerfully say so some more. Mr. Doolittle is an honest man, and acts accordingly—only in this particular case he doesn't *talk* accordingly. And having tried our best to reconstruct him in that one particular, we have to give reconstruction up in despair. Mind you, nothing herein contained shall admit, in the least degree, that the man who faces honey with higher grades has done other than a wicked act, as well as an unwise act."—E. E. Hasty, in Bee-Keepers' Review.

▬▬▬▬▬▬

Large vs. Small Hive-Entrances.—Dr. Miller continues the controversy on this subject in Gleanings, G. M. Doolittle replying in the same number. The Doctor made tests with a thermometer to find out whether the heat was greater in the hive with a large or small entrance, but with no definite result, excepting to disprove the assertion of Mr. Doolittle that it was cooler in the hive than out, in a hot day.

Challenged to prove his assertion that bees can ventilate best with an entrance not more than ½ inch deep, Mr. Doolittle replies: "I don't know that I can prove any such thing, consequently I am not going to try; but from the hours I have lain beside hives with swinging bottom-boards and those with large entrances, and seen the lack of 'fanners' at work, unless those fanners were away up in the hive, I have formed the opinion that the fanners could do more effectual work at the ½ inch entrance than they could where they had all outdoors to send a 'current of air through.'"

The two men fail to come to any agreement as to what is Nature's plan for the queen to follow in laying eggs. Dr. Miller says: "It's Nature's plan to lay the *first* eggs of the season in the center, and it's just as much her plan to lay the next further out, and then further still as the brood-nest increases in size." But Mr. Doolittle insists that Nature tells the queen to lay her eggs in the center, "and when it comes about, by an expansion of the brood, that just the right thing cannot be done, then do just as nearly right as circumstances will allow."

▬▬▬▬▬▬

Northern Michigan has been much spoken of as an El Dorado for bee-keepers. Byron Walker has been there for six years, and in the Bee-Keepers' Review he gives the advantages and disadvantages of that region, premising that the advantages have been set forth heretofore in rather glowing colors. He left Southern Michigan because altho he got good crops the character of the honey in his particular locality was such that ¾ of his colonies were lost in wintering. One advantage in the North is the great variety of flora, extending in the most favorable locations and seasons from early in May till late in September. Wild red-raspberry exists in large areas, yielding with certainty for three weeks a fine amber honey. Basswood, not so reliable, has yielded two out of six seasons. Willow-herb gives a superb white honey the chief part of a month. In best locations it yields three out of six seasons. Last season it failed in most locations. A fair yield from fall flowers three seasons out of six.

A disadvantage is that the best locations near towns and schools are taken up. To get much from willow-herb, the forests must be burned every two or three years, a thing that cannot be depended on, and when the fires do come they're likely to destroy the raspberry. Roads are sandy, stony, and hilly to get around to out-yards. He has 500 colonies in nine different yards, mostly in care of men who have a share, but conscientious, competent men are hard to find. Cool nights and cold winds are a drawback.

BEST

EXTRACTED HONEY FOR SALE

ALL IN 60-POUND TIN CANS.

ALFALFA HONEY

This is the famous white extracted honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

BASSWOOD HONEY

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is greatly preferred by those who like a distinct flavor in their honey.

PRICES OF EITHER ALFALFA OR BASSWOOD HONEY:

A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—One 60-pound can, 8 cents a pound; 2 cans, 7¾ cents per pound; 4 or more cans, 7½ cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. This honey is all

Absolutely Pure Bees' Honey.....

the finest of their kinds produced in this country.

We would suggest that those bee-keepers who did not produce any honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. The pamphlet, "HONEY AS FOOD," will be a great help in creating customers for honey. See prices on another page.

GEORGE W. YORK & CO., - 118 Michigan St., CHICAGO, ILL.

To Our Regular Subscribers—Now for New Readers!

6 Great 50-cent Offers—Each One Free!!

On this page you will find six splendid premium offers, and we will mail your choice of any one of them for sending us $1.00 for **just one New subscriber** for 1899—and we will throw in the last three months of this year's Bee Journal free besides to each new subscriber you send on these offers. That makes 15 months of the Bee Journal to the new subscriber. Or, for sending us **4 New subscribers,** as above, we will mail the sender all of the 6 great 50-cent offers.

JUST READ WHAT THEY ARE:

Offer No. 1.—Samantha at Saratoga.

100,000 Sold at $2.50 per copy.

This is indeed a feast of fun, by the only peer of Mark Twain's humor—JOSIAH ALLEN'S WIFE (Marietta Holley.)

Read this Extract from the Book:

And right here, let me insert this one word of wisdom for the special comfort of my sect, and yet it is one that may well be laid to heart by the more opposite one. If your pardner gets restless and oneasy and middlin' cross, as pardners will be anon or even oftener—start them off on a tower. A tower will in 9 cases out of 10 lift 'em out of their oneasiness, their restlessness and their crossness.

Why I have known a short tower to Slab City or Loontown act like a charm on my pardner, when crossness wuz in his mean and snappishness wuz present with him. I have known him to set off with the mean of a lion and come back with the liniment of a lamb.

And jest the prospect of a tower ahead is a great help to a woman in rulin' and keepin' a pardner straight. Somehow jest the thought of a tower sort of lifts him up in mind, and happifys him, and makes him easier to quell, and pardners must be quelled at times, else there would be no livin' with 'em.

She takes off FOLLIES, FLIRTATIONS, LOW-NECKED DRESSING, DUDES' PUG DOGS, TOBOGGANING, ETC.

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The four "Poultry-Keeper Illustrators" are the greatest books on poultry subjects ever issued, and are a veritable poultry dictionary, covering the ground so completely that, having these four books, one needs scarcely anything more except "grit" to become a successful poultry-raiser. You cannot get such other books in the whole world, not even for $50 each, for they do not exist. Were they given in another form and elaborate binding and colored cuts you might think them easily worth $5 each, but what you want is not elegant printing, and in these we give you the value in information that you can make use of. They have cost much in labor and cash, but you get all this value for almost nothing. We mail the 4 Illustrators for 50 cents.

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Those offers ought to bring us in at least 2,000 new readers during this month and next. You could send in your own renewal for 1899 at the same time you send in a new subscriber, if you wish. If you do, you can select any one of the above offers free for yourself, provided you send at least **two New subscribers** at the same time. That would give you your choice of **three** of the offers—by sending your own renewal for 1899, and two new subscribers ($3.00 in all).

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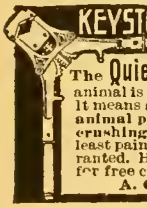

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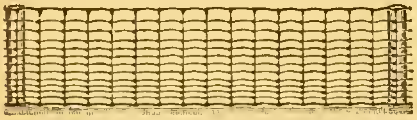

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all winter from the lane, but buy Page Fence and have a clear track. No drifts behind our Winter Styles. Ask for prices.

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GENERAL ITEMS

Good Place for Bee-Keeping.

I am a new bee-keeper, starting four years ago with one weak colony, and now I have 12. They are the little brown bees. I am going to Italianize them in the spring. Bees do very well here. This is a fruit country, the land being cut up into 10 acre tracts. There is lots of fruit, alfalfa and sweet clover for the bees to work on.

G. W. WHARTON.

Umatilla Co., Oreg., Oct. 16.

Bees Did Fairly Well.

Bees have done fairly well in this section of the country. We did not get very much surplus from white clover, as there was not much clover the past season. We had no swarms to amount to anything. We had a good flow in July and August, and there was considerable surplus taken. Aster was a failure this fall. Bees are in fair condition for wintering. There is plenty of white clover for next season. J. L. ODEN.

Rutherford Co., Tenn., Oct. 17.

Bees on a Limb.

A man came to me Oct. 18, and said he had found some bees that had built their nest on the limb of a tree. I took my box and bee-kit, and went with him. Sure enough, there was a fairly good colony of bees with several combs of white honey, and more or less brood. Inside of two hours the man had the honey, and I the bees in a hive where there is plenty of honey to winter them.

This is the third colony of bees I have found under similar circumstances. Of course the bees could not have continued their existence long in such a place. The combs were so built that they shed all the rain, but when zero weather struck them the bees would soon perish.

HENRY ALLEY.

Essex Co., Mass., Oct. 19.

Smoker Fuel—Purifying Wax.

Tell the readers of the Bee Journal if they mix some of the refuse of the wax extractor with their rotten wood for smoker fuel, I think they will be able to kick up a fog that will surprise the crossest bees they have.

I saw an article in the Bee Journal on purifying wax with the solar extractor. Did any one ever try to have a little dam across the lower edge of the comb-basket or pan, so as to retain a portion of the melted wax? The impure is at the bottom—the best is running off at the top.

C. A. HUFF.

Lenawee Co., Mich., Oct. 17.

Did Well for an Off Year.

My bees did very well for an off year like this. The white clover bloom didn't seem to have much if any honey, and the linden seemed to yield honey only a week or so; but the bees made good use of the time it lasted. This is good proof that one strong colony is worth a dozen weak ones. I keep my hives as full of bees as I can, summer and winter.

JOSEPH HENTRICH.

Grant Co., Wis., Oct. 22.

An Enthusiastic Beginner.

About a year ago I became acquainted with the old stand-by—the American Bee Journal—and almost immediately took the bee-fever, and am now an ardent devotee of the honey-bee.

Last fall I purchased 47 colonies of hybrids in common box-hives, and undertook to transfer them to dovetailed hives, and

You Can Learn Shorthand at Home

by our perfected method of giving lessons by mail. Easiest, simplest system. Send stamp for particulars.

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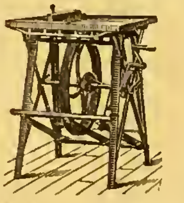

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Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will. Catalogue and Price-List Free.

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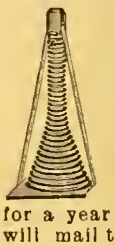

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The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

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They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

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that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

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Ho, for Omaha!

As we have many customers in the Northwest, and believing they will appreciate the low freight rates obtained by purchasing goods from a railroad center nearer to them than we are, getting a direct through-freight rate, thus cutting the freight in half, we have establisht a branch house at 1730 South 13th St., Omaha, Neb., where we will keep a complete line of all Apiarian Supplies, the same as we do at Higginsville, Mo. With the quality of our goods, we believe most bee-keepers in the West are already acquainted, but to those who are not, we will say that our goods are par excellent. Polisht, snowy-white sections, beautiful straw-colored transparent Foundation, improved Smokers and Honey Extractors, and all other first-clas sgoods, are what we sell. Kind and courteous treatment and honorable dealing our motto. On these bases, we solicit an order, feeling sure that if we sell you one bill of goods you will be our customer in the future.

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☞ See Honey Offer on page 698.

found this a pleasing task by using the Heddon method of transferring. In the operation I increast to 53 colonies.

Wishing to Italianize, and also to test the merits of the leading strains of Italians, I introduced queens in the poorer colonies from 12 of the leading queen breeders of the United States. Next year I intend to continue to Italianize from the strain selected as the best in the points that go to make up a superior strain of Italians.

I find the apiary furnishes a pleasant occupation and a fascinating study. I intend to be a constant reader of the American Bee Journal. DAVID M. KITE.

Ray Co., Mo., Oct. 21.

Poor Honey Crop.

The honey crop here has been a poor one. Clover was very plentiful, but the bees did not work on it. The fall flow from aster was very good for about two weeks, then bad weather set in. But the bees gathered enough for winter stores. C. H. MAY.

Page Co., Va., Oct. 21.

Fairly Good Year for Bees.

This has been a fairly good year regardless of the backward spring. Some colonies stored 125 pounds of comb honey; my 28 colonies averaged over 70 pounds of nice comb honey. W. H. POTTORF.

Mason Co., Ill., Oct. 22.

Pretty Light Honey Crop.

I know that I should feel lost without the American Bee Journal. I have 105 colonies in fine condition for winter quarters. I am building a new cellar for them. My honey crop was pretty light this season, with quite a batch of dark, but no light to speak of, as the white clover and basswood failed here. G. H. LINCOLN.

Clark Co., Wis., Oct. 20.

Another Poor Year.

The past season was a very poor one for honey in this county. I have 25 very strong colonies of three banded Italians, and they are well stored with honey for winter, gathered from the fall flow, but not one pound of super honey did I take during the whole season. Another poor year. The cause of it was too much rain in blossoming time. ELISHA CAREY.

Bucks Co., Pa., Oct. 14.

Success of an Amateur.

The past was not such a very bad season, for with two colonies I have taken 106 pounds of comb honey and 27 pounds of extracted, besides increasing to four colonies, which I think is pretty well for an amateur who had only the help of the American Bee Journal. GEO. P. PRANKARD.

Bergen Co., N. J., Oct. 15.

Clover Looks Well.

We are having lots of rain, and clover looks well, so we may have a good season next year. Our honey crop was a very small one this year—about 100 pounds from about 200 colonies. ARTHUR STANLEY.

Lee Co., Ill., Oct. 25.

Tall Plain Sections and Fences.

The honey crop in this section of the State was only about $\frac{3}{4}$ of a crop, and that of a very dark and inferior grade. Bees are generally in good condition for wintering. The young white clover is looking very promising.

We tried four supers of the plain section and fence separators 4x5x$\frac{3}{8}$, and are highly pleased with them. The sections were well filled out, even and beautiful. We will use more in the future. There has been some doubts about them bearing transportation, but I find they are less likely to get injured in shipping than the common sections. They are much more easily manipulated.

I have 16 colonies, very strong (and from 40 to 50 pounds of honey in each hive.) all packt away on the summer stands for winter. R. B. WOODWARD, M. D.

Perry Co., Ohio, Oct. 20.

◆

About One-Third of a Crop.

The early part of the past season was very poor for bees—rainy and cool weather—and bees starving just before white clover came into bloom. Some of my colonies did not recover in time to store any in the sections. The strong colonies did very well, and my average was about one-third of a crop of fall honey. I sell all of my honey in the home market.

I could not get along without the bee-papers. I often find one article worth the year's subscription. JAMES IVES.

Burlington Co., N. J., Oct. 24.

◆

Bees Did Very Well.

My bees did very well this year, as they averaged 50 pounds a colony.

D. B. ABBOTT.

Osage Co., Kan., Oct. 24.

◆

A Good Report.

Last spring I had left 17 colonies, and increast to 34. The honey crop in this part of the country was very good. I got 1,000 pounds of extracted honey, making an average of nearly 60 pounds per colony, spring count, which I sold in the home market readily at 10 cents a pound. I think that is pretty good for a second year's trial of selling honey.

A neighbor of mine, who is an experienced bee-keeper, started with 115 colonies last spring, and at the close of the harvest told me he harvested 10,000 pounds, which he is also trying to dispose of in the home market, at 10 cents a pound. Now if every bee-keeper would try to do that, the large city markets would not be crowded with honey. C. H. VOIGT.

Kewaunee Co., Wis., Oct. 17.

◆

Poor Season for Bees.

This has been a poor season for bees here. Early in the season they laid by stores in the brood-chamber; dry weather commenced in July, and has continued until October. I started with 28 colonies, and doubled the number during swarming season. The new swarms did not all store honey enough for winter, and most of them will die unless fed. My neighbors have fared no better. A. J. CUSHING.

Dunn Co., Wis., Oct. 12.

◆

Anti-Bee Space Again.

Good for Doolittle and Aikin. When they agreed in their discussion that the movable frames in bee-hives "are of no use to the bees, and are of no use to the bee-keeper who never lifts them out of the hives," they hit the truth exactly. And I esteem it as virtually saying the same thing of the bee-space. I have admitted its convenience first, last, and all the time for the bee-master in a warm climate where the winters are mild, and the bees are kept in cellars till warm weather comes again; but I should consider that the large bee-keepers who count their colonies by the hundred or thousand, are of a number that would make a very small percentage of the vast army who leave their bees on the summer stands through the severe season. And why should we labor, and indulge in ill humors to keep the multitude in ignorance of what would be better for them, because a few others have a right to prefer a more costly convenience? That invective fellow who said that Mr. Chrysostom "could hardly be worthy of much notice" because he praised the anti-bee-space hive should be informed by some cool-headed friend that resorting to insult never gives weight to argument with the sensible reader. The box-hive, and the frames with close-fitting ends in the common-sense hive (from which Mr. Chrysostom says he copied) both contain the snug principle of the hollow tree, where the All-wise God made the bees to live; and while we may modify and improve the receptacle, we can never do so safely by eliminating the principle of compactness in a cold climate.

If Mr. Chrysostom has workt wonders the past season with the common-sense principle, which he honors, while the world at large reports failure with the bees, is he not worthy of a respectful hearing? and the principle worthy of a fair investigation? "A word to the wise is sufficient."

"COMMON-SENSE BEE-KEEPING."

Pennsylvania.

Sweet ⁂ Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order.

	5lb	10lb	25lb	50lb
Sweet Clover	.60	$1.00	$2.25	$4.00
Alsike Clover	.70	1.25	3.00	5.75
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Alfalfa Clover	.60	1.00	2.25	4.00
Crimson Clover	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, wanted by freight.

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SEE THAT WINK!

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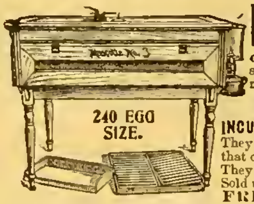
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MAN OR WOMAN or even a **little child** can make an entire success of the poultry business when they use the

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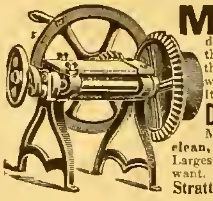

MAKE 'EM LAY double the eggs in the middle of the winter, when eggs are worth the most money. Hens do that when fed on **green cut bone.** It's best prepared by

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Made with or without gear. Cut clean, fine and easy. Can't be choked. Largest line made. Ask for what you want. Catalogue and prices free.

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Testing Honey—Apis Dorsata, Etc.

Mr. H. L. Miller askt if there is any way of testing honey to know if there is glucose in it? Well, my friend Vitzgall says there is a way. Put one tablespoonful of honey and three tablespoonfuls of alcohol in a glass, and shake it well. After awhile all will be dissolved, if it is pure honey; conifern honey shows something not dissolved, but honey adulterated with glucose shows a muddy, whitish sediment. Now please try and report.

I notice that Secretary Wilson expects to make an effort to introduce the giant East Indian honey-bee—Apis dorsata—from the Philippines to gather all the sweet juices in our red clover field. These bees are said to build combs five or six feet long (wired?) and four feet wide. Our standard is 4¼ inches. Manufacturers of bee-keepers' supplies may be a little puzzled about a handy 10-frame hive with such dorsata dimensions; but the bees are not here yet.

We ought to have the red clover with or without Apis dorsata. Let me suggest how without: Pastor Weygandt discovered that a strong queen can be secured by taking out the larvæ from a queen-cell and putting in a larvæ from a worker-bee a few days *younger*. An older larvæ would give a weaker or feebler queen; a younger one will improve the whole development, and should also improve the tongue. I would like to see Mr. Doolittle report on this question. Queen-rearing for red clover honey would mean an increast quantity, if not a better quality of honey. The finest honey is imported from Greece; it is honey gath- from roses. Why can we not have those roses here? Let somebody go for Apis dorsata and somebody else for roses. About sweetness and aroma there is nothing like "Rodomel;" it is the finest honey in the old part of our globe, and the new should have it. J. VOLKERT.

Chesterfield Co., Va.

Colorado.—The Colorado State Bee Keepers' Association will hold their annual convention Nov. 30 and Dec. 1 and 2, 1898, in the State Capitol Building, Denver. The Horticulturists meet Nov. 28, 29 and 30, our first day being their last. This arrangement will give members of both a chance to attend the other's meeting and discuss common interests. R. C. AIKIN, Pres., Loveland, Col.

F. RAUCHFUSS, Sec., Elyria, Col.

Ontario.—The annual meeting of the Ontario Bee-Keepers' Association will be held in Guelph, Dec. 6, 7 and 8, 1898. Owing to the Guelph Fat Stock Show, the Guelph Poultry and Pet Stock Show, and the Experimental Union meeting on the same dates, there will be a large meeting of bee-keepers, and each association will be a help to the other, as many are interested in all the different meetings. All are cordially invited to attend the meetings. W. COUSE, Sec.

Streetsville, Ont.

Illinois.—The Illinois State Bee-Keepers' Association will hold its 8th annual meeting at the State House in Springfield, Nov. 16 and 17, 1898. We will have the advantage of one fare and a third for the round trip—open rate—along with the Odd Fellows, whose meeting is the third Tuesday of November. Our Association has been petitioned by the Northern Illinois Bee-Keepers' Association to take the proper steps to secure the same foul brood law for our State as that of Wisconsin. Excellent board is secured at 25 cents per meal and lodgings just as reasonable. The one dollar for membership fee also entitles you to the American Bee Journal for one year.

Bradfordton, Ill. JAS. A. STONE, Sec.

BEE-BOOKS

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Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, $1.00.

Langstroth on the Honey-Bee, revised by Dadant—This classic in bee-culture, has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages; bound in cloth.

Price, postpaid, $1.25

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages; bound in cloth and fully illustrated.

Price, postpaid, $1.25.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of Queen-Bees are reared in perfect accord with Nature's way. 176 pages, bound in cloth, and illustrated. Price, $1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopædia of 400 pages, describing everything pertaining to the care of the honey-bees. It contains 300 engravings. It was written especially for beginners. Bound in cloth. Price, $1.25.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is too well known to need further description of his book. He is a practical and entertaining writer. You should read his book. 90 pages, bound in paper, and illustrated. Price, 50 cts.

Rational Bee-Keeping, by Dr. John Dzierzon—This is a translation of his latest German book on bee-culture. It has 350 pages; bound in paper covers, $1.00

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called BEES OF HONEY. 100 page pamphlet. Price, 40 cents.

Bienenzucht und Honiggewinnung, nach der neuesten methode (German) by J. F. Eggers. This book gives the latest, most approved methods of bee-keeping in an easy, comprehensive style with illustrations to suit the subject. 50 pages, board cover. Price, 50c.

Bee-Keeping for Beginners, by Dr. J. P. H. Brown, of Georgia. A practical and condensed treatise on the honey-bee, giving the best modes of management in order to secure the most profit. 110 pages, bound in paper. Price, 50 cents.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 p., illustrated. 25c.

Convention Hand-Book, for Bee-Keepers. Thomas G. Newman.—It contains the parliamentary law and rules of order for Bee-Conventions—also Constitution and By-Laws, with subjects for discussion, etc. Cloth, gold-lettered. Price, 25 cts.

Practical Hints to Bee-Keepers — by CHAS. F. MUTH. Also contains a Foul Brood Cure and How to Winter Bees. 40 p.; 10 cts.

Apiary Register, by Thos. G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00; for 100 colonies, $1.25.

Preparation of Honey for the Market, including the production and care of comb and extracted honey. A chapter from BEES AND HONEY. Price, 10 cents

Bee-Pasturage a Necessity.—This book suggests what and how to plant. It is a chapter from BEES AND HONEY. Price, 10 cents.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cts.

Winter Problem in Bee-Keeping, by G. R. Pierce. Result of 25 years' experience. 30 cts.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. Price, 10 cts

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price 10 cts.

Hand-Book of Health, by Dr. Foote.—Hints about eating, drinking, etc. Price, 25 cts.

Honey as Food is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey among should-be consumers. The forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 30 cents; 50 for 50 cents; 100 for 90 cents; 250 for $2.00; 500 for $3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Commercial Calculator, by C. Ropp.—A ready Calculator, Business Arithmetic and Account-Book combined in one. Every farmer and business man should have it. No. 1, bound in water proof leatherette, calf finish. Price, 40 cts. No. 2 in fine artificial leather, with pocket, silicate slate, and account-book. Price, 60 cts.

Green's Four Books, by Chas. A. Green.—Devoted to, 1st, How We Made the Old Farm Pay; 2nd, Peach Culture; 3rd, How to Propagate Fruit-Plants, Vines and Trees; 4th, General Fruit Instructor. Nearly 120 pages. Fully illustrated. 25 cts.

Garden and Orchard, by Chas. A. Green.—Gives full instructions in Thinning and Marketing Fruits; Pruning, Planting and Cultivating; Spraying, Evaporation, Cold Storage, Etc. 94 pages, illustrated. Price, 25 cts.

The Hive I Use, by G. M. Doolittle. It details his management of bees, and methods of producing comb honey. Price, 5 cents.

Kendall's Horse-Book.—35 pictures, showing positions of sick horses, and treats on all their diseases. English or German. Price, 25 cts.

Silo and Silage, by Prof. A. J. Cook.—It gives the method in operation at the Michigan Agricultural College. Price, 25 cts.

Lumber and Log-Book.—Gives measurements of lumber, logs planks; wages, etc. 25c.

Maple Sugar and the Sugar Bush, by Prof. A. J. Cook.—Full instructions. Price, 35 cts.

Grain Tables, for casting up the price of grain, produce, hay, etc. Price, 25 cts.

Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others.—Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 30 cts.

Our Poultry Doctor, or Health in the Poultry Yard and How to Cure Sick Fowls, by Fanny Field.—Everything about Poultry Diseases and their Cure. 64 pages. Price, 30 cts.

Poultry for Market and Poultry for Profit, by Fanny Field.—Tells everything about the Poultry Business. 64 pages. Price, 25 cts.

Turkeys for Market and Turkeys for Profit, by Fanny Field.—All about Turkey-Raising. 64 pages. Price, 25 cts.

Rural Life.—Bees, Poultry, Fruits, Vegetables, and Household Matters. 100 pages. 25 cts.

Potato Culture, by T. B. Terry.—It tells how to grow them profitably. Price, 40 cts.

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(Read Carefully.)

The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only ONE book can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted, see postpaid prices given with the description of the books on this page. Following is the clubbing-list:

1.	Langstroth on the Honey-Bee	$2.00
2.	A B C of Bee-Culture	2.00
3.	Bee-Keeper's Guide	1.75
4.	Bees and Honey [Cloth bound]	1.65
5.	Doolittle's Scientific Queen-Rearing	1.75
6.	Dr. Howard's Foul Brood Book	1.10
7.	Advanced Bee-Culture	1.30
9.	Bienen-Kultur [German]	1.20
11.	Rational Bee-Keeping [Paper bound]	1.75
13.	Bee-Keeping for Profit	1.15
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34.	Maple Sugar and the Sugar Bush	1.20
35.	Silo and Silage	1.10
36.	Winter Problem in Bee-Keeping	1.30
37.	Apiary Register (for 50 colonies)	1.75
38.	Apiary Register (for 100 colonies)	2.00

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Oct. 18.—Fancy grades of white comb honey sell freely at 13c, with good grades from 11 to 12½c, according to finish; ambers bring 8 to 10c, with dark, mixt and unclean, 7 to 8c. Extracted, white, 6 to 7c; ambers, 5 to 6c; buckwheat, 5c. Beeswax, 26 to 27c.

The market is active and nearly all consignments are sold soon after arrival.

R. A. BURNETT & CO.

San Francisco, Oct. 19.—White comb, 9½ to 10½c; amber, 7½ to 9c. Extracted, white, 6¾ to 7¼c.; light amber, 6 to 6½c. Beeswax, 24@27c

There are no changes to record in quotations, but market is firm at the ruling figures. Stocks are light, particularly of choice extracted. A shipment of 309 cases went forward the past week by sailing vessel for Liverpool.

St. Louis, Sept. 9.—Fancy white comb, 12 to 12½c.; A No. 1 white, 10 to 11c; No. 1 white, 9 to 10c.; dark and partially-filled from 5 to 8c, as to quality. Extracted in cases, No. 1 white, 6 to 6½c; No. 2, 5½c; amber, 5c; in barrels, No. 1 white, 5½c; amber, 4½ to 5c; dark, 4 to 4½c. Choice Beeswax, prime, 24c; choice, 24½c. At present there is a good demand for honey. WESTCOTT COM. CO.

Kansas City, Sept. 9.—Fancy white comb, 12@13c; No. 1, 11@12c; amber, 10@11c. Extracted, white, 5½@6c; amber, 5@5½c; dark, 4½@5c. Beeswax, 22@25c.

The receipts of comb honey are larger.

C. C. CLEMONS & CO.

Boston, Sept. 30.—Our honey market shows a decided firmer tone since our last. A few sales have been made at 15c for an extra fancy lot, while almost all sales ranging from A No. 1 to fancy now are made at 14c, while occasionally, something a little off, will bring as low as 12½ to 13c. We do not look to see any lower prices.

Extracted, Florida, in barrels, mostly 6c to 7c, with a good demand. Beeswax, slow sale at 26c for best. BLAKE, SCOTT & LEE.

Indianapolis, Oct. 3.—Fancy white comb honey, 12 to 12½c; No. 1, 10 to 11c. Demand fairly good. Tar-colored comb honey, 8 to 9c, with almost no demand. Clover and basswood extracted honey, 6½ to 7c. Beeswax, 25 to 27c.

WALTER S. POUDER.

Milwaukee, Oct. 18.—Fancy 1 pounds, 12½ to 13c; A No. 1, 12 to 12½c; No. 1, 11 to 12c; No. 2, 10 to 10½; mixt, amber and dark, 8 to 9c. Extracted, white, in barrels, kegs and pails, 6½ to 7c; dark, 5 to 5½c. Beeswax, 26 to 27c.

This market is in good condition for the best grades of honey, either comb or extracted. The receipts of the new crop are very fair, and some of very nice quality. The demand has been and continues to be very good, and values are firm on fancy grades and straight, uniform packing. A. V. BISHOP & CO.

Buffalo, Oct. 20.—This market is much improved in demand on all grades. Strictly fancy 1-pound comb, 13 to 14c; No. 1, 11 to 12c; dark, etc., 7 to 9c. Fancy extracted, 5 to 6c; dark, 4 to 4½c. Fancy beeswax, 27 to 28c; poor, etc., 20 to 25c. BATTERSON & CO.

Columbus, O., Oct. 29.—Fancy, 14 to 15c; No. 1, 12 to 13c; No. 2, 10 to 11c; amber, 9 to 10c. Receipts somewhat heavier, but demand improves as weather gets colder.

COLUMBUS COM. AND STORAGE CO.

New York, Oct. 22.—Receipts of comb honey are large, and there is quite a stock now on the market. While white is in good demand, buckwheat and mixt seem to be somewhat neglected, and quotation prices have to be shaded in order to sell in quantity lots: We quote:

Fancy white, 13 to 14c; No. 1 white, 11 to 12c; amber, 10c; mixt and buckwheat, 8 to 9c. Stocks of extracted are light of all kinds. Demand is good at following prices: White, 6 to 6½c; amber, 5½c; dark, 5c. Southern, in half barrels and barrels at from 55c to 60c a gallon. Beeswax dull at 26c.

HILDRETH BROS. & SEGELKEN.

Detroit, Oct. 20.—Honey in better demand and better prices as follows: Fancy white, 13@14c; No. 1, 12@13c; fancy dark and amber, 10@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

Cleveland, Oct. 27.—Fancy white, 13@ 4c; No. 1, white, 12@12½c; light amber, 11c; buckwheat, 9c. Extracted, white, 7c.; light amber, 6c. A. B. WILLIAMS & CO.

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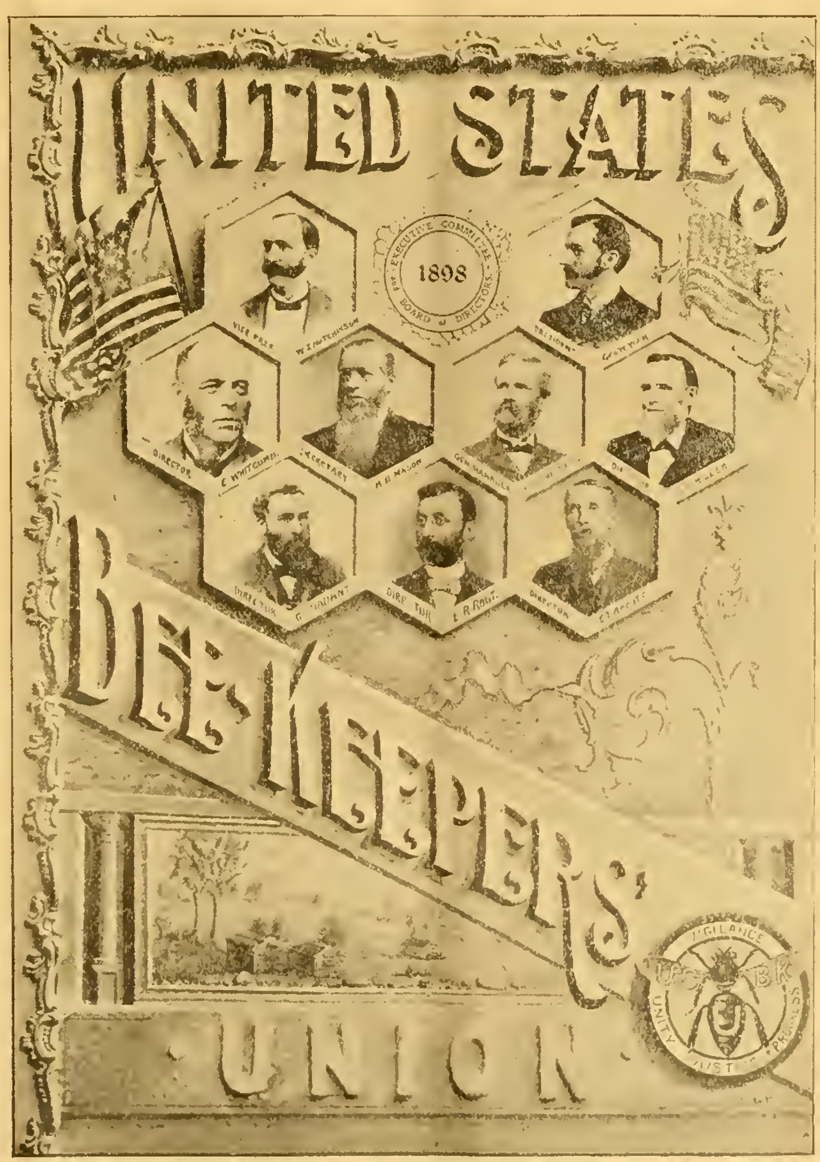
38th Year. CHICAGO, ILL., NOVEMBER 10, 1898. No. 45.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—*From the American Bee-Keeper.*

CONVENTION PROCEEDINGS

UNITED STATES BEE-KEEPERS' UNION.

Report of the 29th Annual Convention Held at Omaha, Nebr., Sept. 13-15, 1898.

DR. A. B. MASON, SEC.

[Continued from page 694.]

SECOND DAY—FORENOON SESSION.

The forenoon session of the second day was called to order by Pres. York at 9:30 o'clock. The members sang the "Convention Song," after which Dr. Miller offered prayer.

Pres. George W. York then delivered the following

President's Annual Address.

Fellow Bee-Keepers and Friends:—

Once more we meet in annual convention; and once more west of the great "Father of Waters." Much of importance has transpired within the short year since last we assembled. Another honey season has come and gone. The year's record can soon be completed. Judging from reports received, in many regions of our country the season has been a very poor one; in a few localities it has been one of abundant yields of honey. In view of this condition, it would seem that the ruling price of honey should be higher than last year. Whether or not it will be, will depend much upon those who have the honey to sell. If like many who rusht their honey to the large city markets last year, the price this year will not be high. But if it is kept out of the large centers as much as possible, and sold more in the local or home markets, there should be no difficulty experienced in securing a good price.

But my address to-day is not intended to be an exhaustive discussion of the proper methods of marketing honey—that may well be left to this convention, the members of which have had much more experience in that line than have I.

If we may judge from the general and almost overwhelming increase in the business of manufacturing bee-keepers' supplies, and the demand for them, this year, there has been an unprecedentedly large growth the past year or two in the industry which we all have the honor to represent. It seems that many of the apiarian manufactories have never had in succession two such large seasons' business as the past two have been. This of itself indicates a development quite beyond the ordinary expectation. It means, I think, that those who were in the business heretofore have been enlarging their apiaries, and that many new recruits have come into our ranks, to begin the business of honey-production.

On account of the smallness of the bee itself many of our new friends might be led to the conclusion that there is little to be learned concerning its management, and not much financial profit to be obtained. But not so. Some of the wisest men of the centuries gone by have devoted much of their lives to a study of the habits and management of the little, busy bee. The apiarian galaxy of immortals includes the names of Huber the blind, Dzierzon, Quinby and Langstroth, who completed their labors and are now entered into well-merited reward. Of the present time leaders who have gained enviable notoriety, may be named, Doolittle, Miller, the Dadants, Root and Cook. Of course there are many others almost equally prominent, both of the past and of the present, who might be included did time permit to name them all.

By patient and painstaking investigation much has been discovered in relation to the usefulness of bees and their profitable care. But who shall say that the end of knowledge concerning them has been reacht? Verily, there is neither beginning nor ending to the study of this wonderful insect. He who created it gave a most valuable gift to mankind. Not alone for the delicious honey it stores for man's use, but as an aid to the greatest success of the horticulturist the bee should be most highly valued. This is a feature of the bee's important work that cannot be too frequently mentioned, or too highly estimated. Often it has been very clearly shown that had it not been for the multitudinous visits of bees during the blossoming period, but little fruit would have resulted. Intelligent horticulturists of to-day encourage the keeping of bees in close proximity to their fruit orchards and groves.

Now, let me call your attention from a contemplation of the bee and its lofty place in the economy of Nature, down to a consideration of this organization, which is maintained in the interest of the producers of honey. It has noble and far-reaching objects to carry out, which are sufficiently important to easily justify its existence. But what we need to do at this convention, it seems to me, is to devise plans by which we shall be able to cause the bee-keepers of this land to see the need of their being active members in this organization. While some good work has been done during the past two years, there remains much that needs to be accomplisht, and very soon. The question is, How can it be done?

In the first place, I have contended all along that we need a large membership. And that will mean a full treasury—a consummation devoutly to be wisht. War is expensive. It costs in cash and energy to fight the battles against wrong. But it pays in the end. The one stupendous evil that needs the aid of every bee-keeper in this land in order to its overthrow, is the giant of adulteration. Not only the adulteration of honey in the city markets, but the adulteration of almost every food product known to-day. In order to a successful suppression of this great evil, all organizations must unite, and bring to bear upon those in authority all the influence possible, so that laws already enacted for the suppression of adulteration shall be rigidly enforced; and that new laws shall be past where such are not now upon the statute books.

Some one has said that the way to secure a national enactment against adulteration of food products is, first, to enforce the State or local laws against this growing evil. I think there is sound sense in this suggestion. In Illinois we have a strong law against the adulteration of foods and medicines. But so far I have heard of no attempt at its enforcement. Now, had we sufficient funds at our command, in the treasury of the United States Bee-Keepers' Union, I should suggest that we at once begin the prosecution of one of the leading adulterators of honey in Chicago. Could a single clear conviction be secured, with the subsequent heavy fines and term of imprisonment imposed, I have no doubt it would have a most wholesome effect not only upon the price and demand of pure honey in Chicago, but throughout the surrounding country as well. And thus, no doubt, other States might be encouraged to begin the enforcement or passage of similar laws, the result of which would be appreciated by a pure-food loving people—a people who are daily suffering from the evil effects of the consumption of the deleterious and disease-producing substances used in forming the miserable compounds put upon the market to-day.

Then, it seems to me that this Union should devise and carry out some scheme by which the public may become better acquainted with the merits of the product of the apiary. Too few people are aware of the real value of honey as a food. Too many look upon it as a medicine, and to be taken in homeopathic doses. Outside of the overthrow of adulteration, I believe there is no other subject that equals in importance to bee-keepers the widening of the demand, or the table use, of honey. For years I have been satisfied that were the honey product properly distributed the price realized by the producer would be more satisfactory—more proportionate to the cost of production.

This, of course, will naturally lead to a discussion of co-operation in marketing—*a great subject!* It has been very plainly hinted to me that I am one who opposed this Union taking up that line of work. Fellow bee-keepers, co-operation in the marketing of honey means much more than most of us have yet thought. If we seemingly are unable to secure a large membership in our Union, when the fee is only $1.00 annually, how could we expect that very many would unite and hold out in an agreement to dispose of their whole crops of honey through this or any other organization? The great trouble would be, I fear, that just enough would remain out to so weaken the effect of the Union's effort along the line of co-operative marketing that failure would be the result. But perhaps by a thorough system of grading, and the establishment of a high standard of purity and quality of the product put on the market through the Union, a demand could be developt sufficiently large so as to take all the best honey that the Union could control or obtain. In that case, success could be assured.

But I am quite willing to leave this whole subject to the wise counsels of the Union's membership—it is too difficult for one small brain to solve satisfactorily.

In conclusion, I desire to express my sincere appreciation of the confidence reposed in me, and of the honor conferred upon me, by my re-election to the presidency of this Union at its meeting in Buffalo last year. With a full realization of my inability to do justice to the requirements of the office, yet I have ever endeavored to do what I could to hold up the Union in its grand mission in the interest of bee-keepers; and I trust that I may soon be permitted to welcome my worthy successor, into whose strong hands I will gladly place the work and responsibility that accompanies the presidential office. Faithfully yours,

GEORGE W. YORK.

The address of Pres. York was then discust as follows:

Dr. Miller—The great quantity of supplies sold this year seems to be ground for the deduction that a large number of persons are going into the bee-business this year. I am not so sure of that. The large quantity of supplies sold this year means that the business was very good last year; it seems to me that is the most there is of it. The man who did a good business last year and used up all his supplies wanted more for this year. It doesn't mean that this is a good year, for it has not been a good year. The quantity of supplies sold is generally an index of what was done the previous year. Of course, there might be a good many new men who have gone into the business, but I rather think the increase in the supply business is largely because the old supplies have been used up and the bee-keepers had to have new supplies for this year.

PROSECUTING ADULTERATORS OF HONEY.

Dr. Miller—As to the advisability of securing a conviction for adulteration, if there is enough money in the treasury, and that can be done, it is one of the biggest things that the Union has to do, or can do. I suppose that our silence might be construed as consenting to the adulteration, or endorsing it. Perhaps there ought to be some expressions of opinion about the matter.

E. R. Root—I would like to inquire of Mr. Secor how much it would probably cost to bring one of these fellows to justice.

Mr. Secor—I don't think that question can be answered now, because we haven't tried yet. The cost depends a great deal upon the case itself—upon its location, and upon many other things. It may cost us $200 to get a proper attorney to prosecute one of those cases. We cannot tell until we have gotten into it. Good attorneys aren't lying around loose working for nothing and paying their own board. When we commence a case of that kind we want as good an attorney as we can get, and we want to prosecute the case successfully. We do not want to attempt the prosecution of a case in which there is much possibility of failure; we want to be sure we have a good case, and then we want to make a success of it. I cannot tell what it will cost.

A. I. Root—Won't the State help in the prosecution? Isn't there a pure food commission in Illinois?

Mr. Secor—I don't think there is. While they have a law on the statute books, I think it is in the hands of any one to look after its enforcement. They have no pure food commissioners, as I understand. We have none in Iowa, and I think they have none in Illinois. In those States where there are pure food commissioners, whose business it is to look after the adulteration of foods, prosecution is a very easy matter, compared with prosecutions in those States where we have none of those advantages.

Pres. York—I had something to say in the American Bee Journal along this line, and Mr. Taylor, of the Bee-Keepers' Review, had this to say in reply:

> "Then the editor forgets that in such cases the information is criminal, and the people of the State prosecute, or furnish a prosecutor, and all the machinery necessary for a fair trial. In this State, and I presume the same is the case in Illinois, the Union would not be permitted to secure the services of an additional attorney to assist at the trial."

I suggested in the Bee Journal that we did not have any money to begin a prosecution, and Mr. Taylor replied as I have read. He simply says that we would furnish the evievence, and the State would do the prosecuting.

Mr. Acklin—The time this matter came up in St. Paul, the commissioners were willing that we should have our own counsel.

Dr. Mason—If it is true that there is a law in Illinois that makes the adulteration of honey, as well as of other foods, a criminal of offense, I cannot see any reason why it is not the business of the prosecuting attorney of the county, or of the locality where the work is being done, to prosecute the adulterators for the offense. It is his duty under the law in Ohio. If we find a man stealing or robbing it is the business of whoever finds him doing it to see that the prosecuting attorney knows something about it, and he then conducts the trial. I cannot see why the Union should not be permitted to employ counsel to advise with the prosecutor. We all know that it takes considerable pushing and urging sometimes to get an official to discharge the duties that he is sworn to perform. I do not see why we should not try our hands at pushing the man who has this business to attend to in Chicago. I do not know why he cannot be seen by somebody in authority in this Union, and consulted in regard to the matter and advised with as to some of the steps to be taken to secure a conviction of some one. Let the Union look up the matter—do the real work of preparing the case, and let the prosecutor know that we are willing to do our best to help him.

E. R. Root—If I understand Mr. Taylor correctly, all we have to do is to bring up the evidence and then the State will take care of the matter and prosecute and bear the expense. If I am correct in that, the Union could go to work this month, or any time. I ask for information.

Dr. Mason—I have been watching, in Ohio, for a chance to catch somebody carrying on adulteration. But we have a good, strong law there, and we have a Pure Food Commissioner, Mr. Blackburn, who attends to his business, and people dare not violate the law. If I could catch somebody violating the law I would go to Mr. Blackburn, and he would be my right hand man in seeing that they were successfully prosecuted.

Dr. Peiro—I have heard a good deal about this subject, and one question I want to ask is this: Is there anybody in Chicago or elsewhere that does this thing on a scale that would justify prosecution? or is it done by some of these little fly-by-nights that just put up a little adulterated stuff and sell it? If you can find a man who is responsible in the event of a judgment, and who puts up enough of that kind of "honey" to have its impression upon the market, then I say let us prosecute; and if we find more than one such man, I would suggest that Dr. Mason be gratified, and that we send somebody from Chicago over into Ohio, and let them prosecute him there.

Dr. Mason—If you will send one of them over to Ohio, we will throw out the American flag and help you. It seems a little strange that with such men as Dr. Peiro and Mr. York living in Chicago, that city should have such a reputation for adulteration! What are you doing?

Pres. York—There is no doubt that there is plenty of such work in Chicago. I secured some samples last winter from one of the largest adulterating firms, and sent the samples to General Manager Secor. I do not know whether he went any further, or had them analyzed, but I was satisfied from the price and from the flavor that the samples were adulterated. That firm ships it all over the State, to suburban towns, and have traveling men out all the time, and they carry those samples as one of their commodities to furnish to grocers. There are plenty of adulterators in Chicago. One of the honey commission men there is one of the largest adulterators. He buys honey from bee-keepers. I used to advertise for him, but I don't any more.

Dr. Mason—If our President thinks there is no doubt about it why don't he find out and let us know. If it is true, let us know it; and if it is not true, let us know it. We are contributing our money for the purpose of securing the conviction of such men. I would be willing to submit to an assessment to carry on the work. If Mr. York and Dr. Peiro can't look after it themselves let us hire somebody to do it.

Pres. York—I would like to suggest that we have General Manager Secor go to Chicago and spend a month, or as long a time as may be necessary, and secure samples of whatever the adulterators are putting on the market there, have them analyzed, and meet the State's attorney or prosecutor there, and begin to do something active along this line. Of course we would not ask Mr. Secor to do that for nothing. I think it would be better to have him do it than to have any one else. His word would count for more, as he is the General Manager of the Union. I think he is the man who should do this work.

E. R. Root—I move that General Manager Secor be requested to take such action as he sees fit in regard to those Chicago adulterators. I believe he will take the right course.

Mr. Secor—I move to amend so as to include the words, "The General Manager, acting under the advice of the Board of Directors"—that the General Manager, acting under the advice of the Board of Directors, proceed to attack the adulterators of honey in Chicago.

E. R. Root—Chicago seems to be the headquarters of the adulterators.

Mr. Whitcomb—It seems to me that to name the place where the attack is to be named would be ill-advised, as it gives them warning in advance.

Dr. Mason—I think we should not confine the attack to any place. It may be found advisable to choose some other place for the attack. And I do not just fall in with the idea of our worthy President, that Mr. Secor is the best man to hunt the matter up. He has a good many other things to do. He might find another man who could do the work better than he could himself.

Pres. York—The reason why I put it that way was because I think the General Manager should purchase the samples himself, not through some one else, and that he should keep them in his possession until they are analyzed, so that there could be no doubt about it.

Dr. Mason—I do not agree with that idea. Just a few weeks ago I was on a jury before which a prosecution for selling medicines with poisonous ingredients contrary to law was on trial in Ohio. I had some conference afterward with our commissioner, who was prosecuting the matter, and I found that he thought it was much better to have some one buy those articles directly, and find out that they were not right, and then let the authorities get after the adulterators. It seemed to work much better than to have the authorities themselves buy them. The purchasers were then called as witnesses before the court, and it had ever so much more weight. It would be lots better if I would go and make the purchase and have Mr. Secor use me as a witness.

Mr. Secor—That matter should be in the hands of the Board of Directors.

The motion as amended by Mr. Secor was then seconded and carried.

Mr. Stilson—I would like to ask a question in regard to whether the General Manager or the Board of Directors could in any way aid parties in different States in preparing and presenting before the different State legislatures bills looking toward the punishment of adulterators of honey or other foods in the different States. Before our legislature this winter I would like to present something of that kind. Will the Union aid us by helping to prepare something of that kind that will stand a test?

Mr. Masters—As Mr. Whitcomb has investigated the laws of Nebraska in reference to adulterated foods, I would like to have him tell us something of what he knows about it.

Mr. Whitcomb—We have no pure food law here. The only thing we could do would be to prosecute a man under the law for obtaining money under false pretenses. We have no pure food law. Such laws have always failed somewhere. The only thing we can do is to prosecute under the law—which is very strict—for obtaining money under false pretenses—selling something for honey which was not honey, but glucose.

Pres. York—Mr. Stilson askt a question as to whether the Board of Directors could aid the bee-keepers in any State to secure the passage of laws against the adulteration of honey and other foods.

Dr. Mason—Our constitution provides for that, I think. In the first place, the objects of this Union are stated in Article II—"to promote the interests of bee-keepers, to protect its members, to prevent the adulteration of honey, and to prosecute dishonest honey commission men." I think the constitution covers that, without any doubt.

Mr. Stilson—My idea in asking this question was, that I knew the Union was organized to promote the advancement of bee-culture; but in this State we have met with this one obstacle every time we have presented this matter before our legislature: There were many of our legislators who thought we were working in the interest of a single industry, while we should ask for a general pure food law covering all products. I wisht to ask whether the Union would aid us in securing the passage of a general law in preference to a law for this one industry.

A. I. Root—It seems to be time that other States were following the State of Ohio. This matter of obtaining money under false pretenses is a small thing—a trifling matter. Bee-keepers are made a kind of a side-issue. These fellows are not only swindling by their adulterations, but they are endangering human life. You will see that throughout the whole world human life is coming to be held at a higher value than it used to be. We all rejoice over that. The progress of the present time seems to be in defending human life and health. This matter wants to come now with emphasis. It is not because bee-keepers are being hindered or crampt in their industry, but because human life and human health is being endangered. Medical men will tell us that they are becoming more and more convinced that the greater number of stubborn chronic diseases are caused by impure food. We want the right kind of food. The great point in presenting this matter of getting better laws is that human health and life are in danger; it is not that bee-keepers are suffering by the frauds, or that somebody is getting swindled.

Mr. Hatch—Colorado has a law especially against the adulteration of honey. If any one is looking for an easy case for prosecution, I think they would find it right in Denver, and without looking very hard, either.

Dr. Miller—I believe that the one thing in which we have made more mistakes than any other has been in considering our own interests alone, and trying to push things with reference to bee-keepers alone. If we are going to do anything, we must try to go in along with others and make a big thing of it, and make a big strike all together. I think Mr. Secor is right in his idea; unless we are pretty sure of carrying a case to a successful issue, we ought not to touch it at all.

Mr. Secor—I was going to suggest that I regard it as one of the legitimate purposes of this Union to secure pure food legislation in the States where there are no pure food laws. I would suggest that if it is possible we should get a general pure food law, saying nothing about honey especially, and if possible getting a pure food commissioner. I think that is a great point.

(Continued next week.)

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Report of the Utah Bee-Keepers' Convention.

The Utah Bee-Keepers' Association held an interesting meeting in Salt Lake City, Oct. 6, the merits of the industry being pretty thoroughly discust.

The first question presented was the purchase of sections and other supplies. Remarks were made by Vice-Pres. Hone, Messrs. Dudley, Swanner, Terry, Schach, and others. As a result it is expected that the bee-keepers will club together and get them at the lowest rates.

Foul brood, pickled brood, and kindred diseases, were discust. A general discussion as to the best methods to be adopted for the production, putting up and marketing of bee-products, showed pretty clearly that by acquiring a practical knowledge of the business, and by adopting the best approved methods, as a rule the bee-keepers were usually more successful than those pursuing other industries of the State.

THE PAST A PECULIAR SEASON.

President Lovesy said that as far as the bee-industry is concerned, this has been a peculiar season. While the honey-flow in some localities has been excellent, from the best information obtainable as a rule the flow seems to have been either short or rather poor. The spring in some localities was wet and cold; then when the fine weather came it cleared up for good. This made the flow all right for awhile. Then later, as a rule, where the supply of water for irrigation was abundant the honey-flow was all right, but where the supply of water gave out, the honey-flow also fell off.

BEE-DISEASES—IN UNION IS STRENGTH.

While many have been successful others have been unfortunate with bee-diseases. There ssems to have been a lack of interest in getting the bee-law in force in some counties. Disease has broken out in some instances, and no one having any authority to look after the matter, it has caused some distress and loss. This, and also a lack of interest among bee-keepers in purchasing their supplies and disposing of their products, has demoralized prices, while under proper conditions the shortness of the crop should have had a tendency to have advanced prices materially.

Some bee-keepers ask if it is to their interest to join an association. It should be plain to all that if the bee-keepers and other societies would unite for their own benefit they could accomplish almost any desired reform. They could prevent unscrupulous dealers from buying glucose for two cents and selling it as honey for 10 cents; they could at least procure laws that would cause all packages to be plainly markt as to what they contained. Again, many of our practical bee-keepers credit much of their knowledge of the industry to attending the bee-meetings. In union is strength, and without it little if any reform can be accomplisht.

GOOD REPORT FROM OMAHA.

A number of our bee-keepers furnisht honey for the Trans-Mississippi Exposition at Omaha, and we have sent a creditable exhibit. We have kept up the reputation of the State as a honey-producer. The report of our exhibit is 95, as follows: Flavor, 45, on a scale of 50; clearness, perfect, 10; ripeness, perfect, 20; color, 10; general appearance, 10; total, 95; perfect, 100. This is considered an excellent showing, as flavor is more or less a matter of taste.

YIELDS OF HONEY, ETC.

W. E. Smith reported an excellent flow of beautiful white honey in Keysville, Hooper, and vicinity. Mr. Jacobson, of

San Pete, gave some good reports of large yields of honey this season in different counties in the State.

Joshua Terry, of Draper, reported that the Utah honey exhibit at the Trans-Mississippi Exposition at Omaha was a credit to the State and to the bee-industry.

Many of our good-natured bee-keepers promise to attend the bee-meetings, but they too often forget it.

REPORTER.

CONTRIBUTED ARTICLES

No. 1.—The Care of Bees for Wintering.

BY C. P. DADANT.

For a number of years past we have had very good winters for bees, and the losses have been small. This success is likely to cause us to be less particular about putting the bees in proper condition to go safely through the period of cold weather that may usually be expected in this latitude.

What are the necessary requirements to safely winter a colony of bees? In my mind I divide these requirements under five heads:

1st. A sufficient number of bees.
2nd. A sufficient quantity of food.
3rd. Food of the proper quality.
4th. An occasional flight during cold weather.
5th. A certain amount of shelter.

The first and main requirement is the number of bees. It matters but little how well the other four reqirements may be fulfilled, a handful of bees, in this latitude, cannot be safely wintered, and in hard winters it requires a very strong colony to safely go through the almost polar extremes of cold, which are so often experienced, and which make us compare our winters with those of Siberia.

The number of bees which forms the colony at the beginning of winter often depends upon circumstances entirely independent of the will or the management of the apiarist, and we can therefore give but little advice on this point. Probably the only time when the bee-keeper can be of any help to his bees, to secure a sufficient amount of strength, is after a short crop, when the bees have gathered so small an amount of honey that they have been unable, tho probably willing, to rear a sufficient supply of brood. By judicious feeding in time, that is, before the opening of cold weather, quite an amount of brood-rearing may be induced, and the strength of the colony materially increast by this means.

To obtain this end, the feeding must be slow and regular, for bees will breed mostly when they find food; while if the colony is strong, and the supply of honey only is needed, the feeding should be as speedy as possible. It is very easy to understand why breeding depends somewhat upon feeding. The queen needs to be copiously fed, in order to lay a liberal number of eggs daily. When the bees are at rest, and no honey is harvested, she is not induced to eat much, for none of the bees are loaded. But when honey is coming in, either by artificial feeding or by natural sources, the queen incessantly meets bees with a full honey-sac, that offer food to her, and the egg-laying propensity is increast in her thereby. To be sure, there are natural circumstances—weather and season conditions—which will tend to prevent a ready production of eggs at this season; while the reverse of these conditions in the spring would have the opposite effect; but aside from the circumstances that are beyond the control of man, it is not to be doubted that much may be achieved towards increasing the number of bees in a hive, previous to winter.

Yet, there are seasons in which the concourse of circumstances have created peculiar conditions, and the hive is depleted of its bees tho the harvest has been sufficiently plentiful to fill the brood-combs with even more honey than is needed for winter. As an instance of this I will cite one fall, in which our bees had to travel about two miles in order to harvest a good supply of honey, and during which a number of quick and unexpected day-storms destroyed many of the little harvesters on the way to and from the field. Their numbers diminisht so that there were not enough bees left in the hive to help keep the brood warm, and the winter loss was tremendous.

I remember, also, buying a box-hive full of honey, years ago, from an old-time bee-keeper. It appeared that a swarm was put in this hive during a good flow of clover, and the crop was so plentiful that they filled the box from top to bottom. As there was no room worth mentioning for brood, and the queen was perhaps old, the colony had dwindled so that the remaining bees died at the opening of winter, and it had some 60 or 70 pounds of honey, very white and nice, with not to exceed six square inches of empty comb at the bottom. Such occurrences are not altogether unavoidable, especially to the apiarist who keeps a close watch over his bees; but they are possible, and when the conditions are discovered too late no help can be given.

Then there are other circumstances, some of which are not yet fully understood by us, to cause colonies to dwindle and become weak. Not more than two days ago (Oct. 26) I was helping the boys to remove the supers preparatory to packing the hives for winter, when we came to a colony of bees—fine Italians—in which perhaps two handfuls of bees were scattered about away from the cluster, in the super, as well as in the body of the hive. This circumstance is unintelligible to me. The morning was cold and frosty, and, in normal conditions, these bees should have been united to the cluster at the bottom of the hive; but as they were scattered about they had become chilled and were likely to perish.

We can therefore say that the quantity of bees necessary to a good wintering is not always dependent upon the will or care of the apiarist, but can only be improved by him to a certain extent.

In another article I will examine the other propositions laid down at the beginning of this article.

Hancock Co., Ill.

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An Old-Time Large Yield—Historical.

BY DR. E. GALLUP.

On page 644, Mr. Cameron says he remembered long ago that Dr. Gallup said that he (Gallup) got from one colony 50 pounds of honey per day. Mr. Cameron made a mistake of 30 pounds, thanks to Dr. Mason for correcting him.

Now I propose to get in some of my notions that crawled through my noddle at that time. I had received my first honey-extractor the season before, and of course had large ideas. I was then using the Gallup 12-frame hive, and my idea was to get up a large hive all on the ground floor, as I did not wish to be compelled to take off a top hive or super to examine the breeding department, etc. So I built a hive to hold 48 frames, 24 in each end. The division between each apartment had an inch wide slot the whole length for the bees to pass through, with a large portico (*a la* Langstroth) at each end; a half-inch entrance the whole width of the hive at each end, a separate honey-board over each apartment, and a movable roof over all. Of course, the entrances were managed to suit the size of the colony.

Early in May I hived my first swarm in that hive, and it was a very large swarm, from my Adam Grimm stock of Italians. I inserted a division-board so as to conform the size of hive to the capacity of the swarm, and confined them to one apartment. My first intention was to hive two swarms in the hive, but that queen turned out so prolific that she knockt my intentions in the head.

As soon as they commenced building drone-comb, I filled out that apartment with full sheets of ready-made worker-comb (for we had no foundation at that time), and alternated empty combs between full combs of brood. The season happened to be just right, so the bees gathered sufficient to keep up all operations in the hive, and still not sufficient for them to store any amount in the way of the queen; and she occupied the whole 24 *fully*, with brood and eggs, in short order. I then removed the opening between the two apartments, set 12 combs of brood in the other apartment, and filled all up with ready-made worker-comb, mixt in promiscuously with the brood.

Now, understand what I have heretofore said, that my Grimm stock of bees were longer-lived than ordinary bees. I do not now recollect at what time the basswood bloomed that season, but this I do recollect, that at the time I had the largest and most numerous colony of bees that I ever had in a movable-comb hive. At night, when they quit work, there would be a fair-sized swarm clustered in each portico, and both entrances open to their full capacity, each one-half inch wide or deep, and 36 inches long.

I had upland and very lowland basswood, any quantity of it, near my apiary, and one variety blossomed two weeks later than the other, which prolonged the basswood season; and the weather could not possibly be better for 30 days in succession. I extracted from one apartment one day, and from the other the next; did not extract from any combs that had brood, and the honey was all well ripened and matured. I put it in oak barrels or kegs; I sent one keg to Mr. Langstroth, and he pronounced it first-class in every respect. He said in a letter to me that he had a couple of gentlemen from Boston to dinner, and they made the remark that if they could get such honey in Boston it would be worth 30 cents a pound. It was candied hard, and as white as the driven snow.

That was the season that my bees gathered honey by moonlight. I had four large basswood trees right in the apiary, and the secretion of nectar was as profuse as it is here in Southern California in a favorable season.

I made some six or seven other hives on the same plan, containing 36 combs each, and made two long-idea hives on the Adair principle; used Gallup frames in all. The Adair principle did not work satisfactorily in any respect. That was the time I hurrahed that I had a non-swarming hive. The colonies did not swarm the second season, but all superseded their queens, and the third season they were the first hives to cast swarms in the apiary, some 10 days ahead of the 12-frame hives, and the swarms were so large that I had to use two and three story standard hives to put them in.

Well, that was the season that I took 600 pounds from that large colony in 30 days. It was the best continuous flow of basswood honey I ever saw—I mean the first season I used the large hives. I took 150 pounds of fall honey from that same hive that season—750 pounds in all. Do you wonder that Gallup hurrahed? It was all gathered by bees produced by one single queen.

Now, Mr. Cameron, what are you going to do about it, anyway?

If I get the time I shall give my ideas about rearing large, prolific, and long-lived queens and bees. Orange Co., Calif.

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Do Italians Bees Produce Better Honey?

BY EDWIN BEVINS.

On page 646, Mr. Hart again gives me "Hail Columbia.' I wish here to reiterate that what I have said was not said with any feeling of disrespect towards Mr. Hart, nor have I said anything that was designed to do him any injustice. If I was so unfortunate in my choice and arrangement of words as to leave the impression on his mind that I intended him any wrong, I humbly beg his pardon.

I will go farther, and say that I now believe that Mr. Hart's question was askt in all honesty and sincerity, and without any thought of "putting up a job" on the bee-keepers. I did say in the beginning that it "lookt" as if Mr. Hart might be doing this. This seams to be the head and front of *my* offending. I will take that all back, and say that I am satisfied that Mr. Hart askt this question solely with a desire for information.

Well, how much has he got up to date?

Let us look over the ground and see what has been brought out since Mr. Volkert ventured the opinion that the better quality of Italian honey is due to the greater activity of Italian bees.

But, first, let us have a restatement of Mr. Hart's question. Mr. Hart wanted to know why Italian bees store a better quality of honey than blacks and other bees, when all have access to the same sources of supply. As I understood the question, he wanted to know why Italians store a better quality of honey than other bees when all have access to, and all store from, the same sources of supply, all would gather from these same sources in about equal proportions according to the number of bees engaged in the work. This I think was Mr. Hart's idea, but I am not certain. On this point, and a good many others, he seems able to speak for himself.

Now for the new light which has dawned on the question.

On page 595, C. P. Dadant expresses the opinion that the better quality of the honey is due to the fact that the Italian bees have "better developt olfactory nerves, and are therefore better able to select their food." In other words, the honey of Italians is better because the bees gather from a better class of flowers. If Mr. Hart's question did not have the extended meaning which I supposed it had, then what Mr. Dadant says is a fair answer to the question. If it did have this extended meaning, then what Mr. Dadant says is no answer at all. No one ever doubted or denied that Italian bees would store a better quality of honey from white clover than other bees would store from honey-dew and basswood and buckwheat. But suppose that only one source of supply is available at one time, or that bees gather from all sources alike, what will be the difference then?

The closing sentences of Mr. Hart's last article betray the fact that he is brimful of belligerency. It is therefore to be supposed that he will continue the warfare until, Spaniard-like, his "honor" is satisfied. Then, perhaps, will come the peace for which I plead in a former communication. In the meantime let somebody come to the front and tell us why Italian bees store better honey than other bees when all have access to, and *all store* from, the same sources of supply. I do not yet believe there is any difference that is discoverable.

Decatur Co., Iowa.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

The "Boil" that made Mr. Taylor "Sic."

A correspondent writes: "'Sic' is a Latin adverb, meaning 'so; thus; in like manner;' but on page 612 of the American Bee Journal for Sept. 29, it seems to me to have been used as many now use 'See?'"

I think Mr. Taylor is too accurate a writer to have used the word "sic" with an unusual and really incorrect meaning. In general, if not always, when used by English writers in brackets, the word is used to call particular attention to an inaccuracy of some kind. If, for example, I say that a man of great literary pretensions wrote to me, "I will meat you at the cars," the spelling of the third word in the quotation might be corrected by the printer, or, if not corrected, the hasty reader might not notice it, and the careful reader might think it a mistake of the printer. To avoid anything of this kind, it is given, "I will meat [sic] you at the cars." That's as much as to say, the word was written "thus," just as here spelled.

When I wrote, "I wish I knew what Mr. Taylor means by that word "sic," I did not refer to the meaning of the word, but I wanted to know what there was wrong in what I had said. If he referred to the word "boil," I think *he* was in error, and if to something else, I'd like to know where I was in error.

I have faith in Mr. Taylor's desire to be an honest critic, and when he has time for it he will say where my error was; and if the error was his, he will be more anxious to point it out than to point out the errors of others. C. C. MILLER.

Making Nuclei and Moving to Colorado.

I lately moved here with the intention of engaging in the bee-business, but find it a poor country for bees. I have 20 colonies, and can't sell here for more than $1.00 a colony. I wish to remove to Colorado. Would it pay to purchase queens and divide each colony into four or six nuclei, discarding all the old bees and shipping about 10 nuclei boxes with say 40 or 60 nuclei, in the spring, and build them up in Colorado? I have the dovetailed hive with Hoffman frames. There are but a few days that bees are confined here during winter. There are millions of flowers, but they don't appear to secrete nectar, and the bees won't work in the sections, as the flow is not continuous. VIRGINIA.

ANSWER.—I don't know. It might be a good investment, and it might not. Perhaps it might be better to ship the colonies, and then increase after reaching destination. If you break up all into nuclei, you'll find it slow work building up. When you have bees and brood for only one or two frames they seem to stand still for a long time, but when they get up to about four frames of brood they push right along. So if you want to go fast it's well to go a little slow at the start. Instead of forming all your nuclei at the start, have only a few at first, and then as fast as you get them built up start more.

Cellar Temperature—Putting in Bees.

1. Would a temperature of 65° be too warm for a cellar to winter bees in?

2. Do you smoke the bees at the entrance a little when you put them into the cellar? MICHIGAN.

ANSWERS.—1. I'm afraid it would. Possibly it might be all right if you could have it perfectly dark and the air constantly pure, the latter being perhaps the more important of the two.

2. No, the desirable thing is to get them into the cellar with the least disturbance possible. Smoking them, or jarring the hives, would have about the same effect as a longer confinement. The best thing is to get them into the cellar at a time when they are not easily stirred up, and so quietly that they will not notice that they are being carried. A good time for this is the next day after they have had flight. If they are very troublesome about flying out, take a big cloth, make it pretty wet, then lay it against the entrance so no bees can get out.

Growing Sweet Clover in Texas.

I would like to keep a few colonies of bees for my own use, but will have to plant something for them.

1. Will sweet clover grow here?
2. Does it come from the root, or is it planted every year?
3. How much would I need for five or six colonies?
4. What time should it be sown?

TEXAS.

ANSWERS.—1. Mrs. Harrison reports that it will not grow in the part of Florida where she has been. I don't remember that any other place has been reported where it would not grow.

2. It comes from the seed this year, but doesn't blossom this year. It lives over winter, grows big next year and blossoms, then dies root and branch, having lived only through the one winter.

3. I don't know. At a rough guess I should say two acres would keep them busy when at its best, and perhaps half as much. But mind you, it doesn't yield honey throughout the entire season, commencing not till after white clover begins, but after it does begin it continues till frost to yield more or less.

4. It may be sown in the spring, but perhaps it will be better to sow in the fall. It seems to catch best if sown on tolerably hard ground where cattle or other stock may tramp the seed in.

Transferring and Italianizing—Packing Bees for Winter, Etc.

1. Next spring I want to transfer my bees from box-hives into 8-frame dovetailed hives, and I would like to transfer and Italianize at the same time, as it is such trouble to find the black queens on the combs. Would it work all right to place entrance-guards on the dovetailed hives at the time of transferring, thereby keeping out all black drones and queens, and giving each colony an Italian queen in a cage, using a little peppermint to give all one scent? Or, could I transfer one colony when they are working well on ash-leaved and hard maple, give them an Italian queen, then transfer the others, giving each colony a frame of eggs from the Italian queen and let them rear their own queens?

2. How long should I wait after transferring the first colony and introducing the queen, before I transfer the others in order that the young queens may meet Italian drones?

3. I would like to follow the last-named plan if it would work all right. Would I be apt to get any surplus honey, or increase by swarms, by so doing?

4. What constitutes "No. 1" and "fancy honey?"

5. Can you name a good, reliable firm to ship honey to?

6. In packing my bees for winter, I put on a super, then on the frames I place a Hill's device, on which I put cloth that is partly woolen, the thickness of an old quilt, on which I place a chaff cushion, then another thickness of quilt. Should I then put on the regular hive-cover before putting on the winter-case roof?

7. I had an experience with one colony the past summer that I do not understand. I introduced an Italian queen in a rather weak colony which had been queenless some time, and about three weeks after, one evening just at dusk, I saw bees coming out of the hive; some climbed up the hive as when a swarm is issuing, then they would fly away. It was so dark I could not see them after they left the hive. Afterward, when I opened the hive, I found the combs full of moth-worms, but no bees. Do you think the bees went to the woods so late?

8. I put unfinisht sections on a strong colony to clean out, but they did not do it. What was the reason? They were on nearly two weeks.

NEW YORK.

ANSWERS.—1. I very much doubt whether you will find it a satisfactory thing to Italianize at the time of transferring. The bees will have enough on hand to repair damages and keep things straight at time of transferring, without the extra strain of changing queens. When you get your bees in hives with movable frames, you will probably not have as much trouble as you anticipate in finding the queens. And if you depend on the use of perforated zinc to strain out the queens, you can do that more easily after the bees are settled in the frame hives than at time of transferring.

2. If the colony that receives the Italian queen is strong, and if the season is favorable, so that she lays some eggs in drone-cells almost as soon as introduced, you will be pretty safe to start queen-cells about two weeks after the introduction of the Italian queen. But if you are not fond of disappointment, don't count too strongly on having all your young queens mated with drones from the Italian colony. If honey is your main object, you will probably get as much by having the young queens of Italian stock meet drones not related, even if they are black.

3. You might get both surplus and swarms by the plan outlined, but very likely your performance would hinder somewhat. Better study up from the text-books the matter of rearing queens, perhaps obtaining Doolittle's book on queen-rearing; get one of your colonies Italianized as early as convenient, let the bees in the box-hives swarm, hiving the swarms in frame hives, and transferring from the old hives three weeks after swarming. Then having queens ready in nuclei, you can Italianize at your leisure. [Doolittle's "Scientific Queen-Rearing" book, bound in cloth, we mail for $1.00.—EDITOR.]

4. According to the rules of grading adopted at the Washington meeting of the North American Bee-Keepers' Association, the two grades were as follows:

FANCY.—All sections to be well filled; combs straight, of even thickness, and firmly attacht to all four sides; both wood and comb unsoiled by travel-stain or otherwise.

No. I.—All sections well filled, but combs uneven or crooked, detacht at the bottom, or with but few cells unsealed; both wood and combs unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1 dark," etc.

5. [All the firms named in the column of "Honey and Beeswax Market Quotations" in this journal are supposed to be reliable. If any of them treat any reader of the American Bee Journal unfairly, we would be thankful to know it.—EDITOR.]

6. If there is room for it you may as well put it on.

7. The bees that you saw flying away from the hive late in the evening were probably robbers, the colony having been overcome before that time by the robbers.

8. I don't know. My bees act exactly the same way, and I don't know any satisfactory way to get sections emptied out by any particular colony.

Questions on Cellar-Wintering.

I have 23 colonies and will winter them in the cellar under my house. The cellar is 18x29 feet, and 8½ feet deep.

1. How should I ventilate this cellar?
2. How many colonies is it advisable to put into such a cellar?
3. How high should I keep the hives from the ground?

WISCONSIN.

ANSWERS.—1. Any way that will get fresh air into the cellar without cooling it off too much. And that's pretty much the same as saying, any way that will get the foul air out of the cellar without cooling it off too much. If there's a chimney running down into the cellar, a stove-pipe run from the cellar into that will be, in most cases, all that's necessary. For the cracks in the cellar wall will be enough to let in fresh air to supply the place of that drawn out by the draft of the chimney. Where the chimney does not run down into the cellar, connection may be made with it by means of a two-inch pipe running up through the floor and running into the pipe of a stove in the room above. If the number of colonies is not more than 23, it is possible that your cellar may winter all right without any special attention. At least you could try it. As long as the bees are tolerably quiet, and the air in the cellar smells sweet, there is not likely to be much danger as to the ventilation.

2. 100 colonies or more ought to be comfortable in it.

3. Some think a foot high, altho some of mine are only raised three or four inches, and winter well.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all other bee-keepers possible to subscribe for it. See 6 big offers on page 715.

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the Joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Care of Bees for Wintering is a subject on which Mr. C. P. Dadant will write a series of articles for the American Bee Journal, the first of which appears in this number. Every bee-keeper at all acquainted with bee-litearture knows that there is no more competent authority in this country to write on any phase of practical bee-keeping than the Dadants. So these articles will be a treat, especially to the newer bee-keepers. Read them, and heed them.

◆

Our Front Page Illustration this week will be recognized at once by all who saw a copy of the Omaha convention program, as it appeared on its first page. It is the result of an idea incubated in the versatile brain of Mr. H. E. Hill, editor of the American Bee-Keeper, and we think all will agree that it is a very neat and appropriate design. Mr. Hill was kind enough to loan us the engraving, so that all our readers might have an opportunity to see it. When granting its use he wrote:

> DEAR MR. YORK:—As an advertisement for the Union, I would like to see the cut you request given a place in all the bee-papers, so that its object—that of calling particular attention to the Union, generally—might be accomplisht. As the matter stands at present, I am by no means sure that my plan was a success, since the expense of the advertisement so far would have given me over 20 memberships in the Union, and that, perhaps, might have been better for the "cause" than the advertisement; but I hope it may have some beneficial effect.
>
> H. E. HILL.

Now, why can't at least 100 of our readers send in their membership dues to the Union this month, and make Mr. Hill feel fully five times glad he got up that illustration?

Good Honey-Year in Canada.—Editor Root, in Gleanings for Oct. 15, thus refers to a visit from Editor Holtermann, of the Canadian Bee Journal, and tries to account for the good honey season in Canada, and the almost total failure in the United States:

> Mr. R. F. Holtermann, who made us a short visit on the 7th inst., reports that the bee-keepers of Canada have had a most excellent season. The year throughout the United States (excepting Colorado, Florida, Vermont, Michigan and Northern California) has been a most signal failure. Now, why should Canada, so near us, have a good honey-flow, when we here in the United States have had almost the opposite? I remember last summer, when clover ought to begin to yield, we had been having quite a spell of dry weather. Day after day went by, but no rain. Finally, when it did come, and copiously, too, we hoped, but hoped in vain, that the long-expected nectar would come. While these copious rains seemed to be general over the United States, and while they came in time to stimulate general farm crops, it was evident they were *too late* to have any decided effect on the honey crop of the United States—too late, perhaps, by two weeks. Now, why did the bee-keepers of Canada enjoy a good season? This strikes me as a possible explanation:
>
> The honey-flows in Canada are anywhere from ten days to two weeks later than in the United States. Assuming that our friends who are north of the line enjoyed those same rains that we did, and at the *same time*, then those same rains came just in time to stimulate nectar secretion in the blossom, but just too late for the United States.

◆

Tin vs. Wood for Honey.—A short time ago we were again thoroughly convinced of the great superiority of tin over wood for making honey-receptacles. We saw some barrels of honey emptied, which, before the honey was put in, weighed 28 pounds each. After the honey was removed those same barrels weighed 40 pounds.

We are surprised that any bee-keeper will persist in using barrels for holding extracted honey. He certainly would not if he had to *buy* honey in them. Besides the large amount of honey which they soak up, they are hard to handle, and when once the honey is granulated, it is a big job to dig it out.

How different are the 60-pound tin cans. They don't soak up any honey, and the honey they contain can be reliquefied so easily, in case it has granulated.

We do hope the time will soon come when wooden barrels for holding honey will be generally condemned, and that the much lighter, handier, and ever so much better tin cans will take their place.

◆

Apiarian Awards at the Trans-Mississippi—The following premiums were awarded in the Apiary Department of the Trans-Mississippi Exposition at Omaha, by Hon. Eugene Secor, of Forest City, Iowa, who was the judge:

BEE-HIVES.—Emerson T. Abbott, of Missouri, St. Joe hive, bronze medal; Douglas County, Nebraska, Improved Langstroth hive, bronze medal; E. Kretchmer, of Iowa, collection of hives, gold medal; G. B. Lewis Co., of Wisconsin, collection of hives, gold medal; Leahy Mfg. Co., of Missouri, collection of hives, silver medal; The A. I. Root Co., of Ohio, collection of hives, gold medal.

APIARIAN IMPLEMENTS AND SUPPLIES.—E. Kretchmer, gold medal; G. B. Lewis Co., gold medal; Leahy Mfg. Co., silver medal; The A. I. Root Co., gold medal.

BEE BOOKS AND BEE-LITERATURE.—E. Kretchmer, honorable mention.

ALSIKE CLOVER COMB HONEY.—L. G. Clute, of Iowa, bronze medal.

HEART'S-EASE COMB HONEY.—L. D. Stilson, of Nebraska, silver medal; L. G. Clute, bronze medal.

DANDELION COMB HONEY.—L. G. Clute, honorable mention.

ALFALFA COMB HONEY.—E Kretchmer, silver medal; Hon. G. W. Swink, of Colorado, silver medal; Lovesy & Bouck, of Utah, bronze medal; Bennett & Diesem, of Kansas, bronze medal; I. L. Diesem, of Kansas, bronze medal.

LINDEN COMB HONEY.—Nebraska Commission, silver medal; Douglas County, silver medal; E. Kretchmer, silver medal; L. G. Clute, bronze medal.

SWEET CLOVER COMB HONEY.—Wm. Stolley, of Nebraska, silver medal.

WHITE CLOVER COMB HONEY.—Dr. E. K. Jacques, of Minnesota, silver medal; D. A. Freeman, of Minnesota, silver medal;

Mrs. H. G. Acklin, of Minnesota, silver medal; L. G. Clute, silver medal; E. Kretchmer, silver medal; Lovesy & Bouck, honorable mention.

HONEY IN DIFFERENT STAGES OF GRANULATION.—L. D. Stilson, honorable mention; E. Kretchmer, honorable mention.

SAMPLES OF HONEY.—Aug. C. Davidson, of Nebraska, silver medal; L. D. Stilson, gold medal; State of Minnesota, silver medal.

HEART'S-EASE EXTRACTED HONEY.—Douglas County, silver medal; L. D. Stilson, silver medal.

SWEET CLOVER EXTRACTED HONEY.—Douglas County, silver medal; Wm. Stolley, bronze medal; Nebraska Commission, bronze medal; E. Kretchmer, bronze medal.

WHITE CLOVER EXTRACTED HONEY.—Lovesy & Bouck, bronze medal; G. M. Whitford, of Nebraska, silver medal; E. Kretchmer, silver medal; L. G. Clute, silver medal; Dr. E. K. Jacques, silver medal; J. B. Jardine, of Minnesota, silver medal; H. L. F. Witte, of Minnesota, silver medal; D. A. Freeman, silver medal; Mrs. H. G. Acklin, silver medal; W. J. Stahmann, of Minnesota, bronze medal; Scott LaMont, of Minnesota, bronze medal.

EXTRACTED BUCKWHEAT HONEY.—Douglas County, no recommendation.

ALFALFA EXTRACTED HONEY.—G. W. Swink, silver medal; Lovesy & Bouck, bronze medal; E. Kretchmer, bronze medal; A. G. Forney, of Kansas, honorable mention; Fred H. Glick, of Kansas, bronze medal; Bennett & Diesem, honorable mention; I. L. Diesem, bronze medal; Nebraska Commission, honorable mention.

LINDEN EXTRACTED HONEY.—Nebraska Commission, silver medal; Aug. C. Davidson, bronze medal; L. G. Clute, silver medal; Douglas County, silver medal; Nathan Jones, of Minnesota, bronze medal.

RASPBERRY EXTRACTED HONEY.—Mate Williams, of Minnesota, silver medal.

HONEY IN MARKETABLE SHAPE.—Aug. C. Davidson, bronze medal; Nebraska Commission, bronze medal.

HONEY-SUGAR.—L. D. Stilson, silver medal.

HONEY-PRODUCING PLANTS PREST AND MOUNTED.—Winnie L. Stilson, of Nebraska, gold medal; Douglas County, bronze medal; Cleveland Cross, of Nebraska, bronze medal; Clark E. Bell, of Nebraska, bronze medal.

UNREFINED BEESWAX.—E. Kretchmer, silver medal; Douglas County, honorable mention; L. D. Stilson, bronze medal.

DESIGNS IN BEESWAX.—Mrs. E. Whitcomb, of Nebraska, gold medal; Douglas County, silver medal; Mrs. Mary Segar, of Nebraska, silver medal; Mrs. Della Benson, of Nebraska, silver medal.

REPRODUCTION OF BEE-CULTURE 50 YEARS AGO.—Douglas County, silver medal.

SWEETS IN WHICH HONEY IS MADE TO TAKE THE PLACE OF SUGAR.—Mrs. E. Whitcomb, silver medal; Mrs. Frank J. Preiss, of Nebraska, silver medal.

EXHIBIT OF BEES AND QUEENS IN CAGES.—Nebraska Commission, silver medal; Douglas County, silver medal.

EXHIBIT OF QUEEN-BEES IN CAGES.—E. Kretchmer, honorable mention.

EXPERIMENTAL TEST OF FULL COLONIES OF BEES.—Douglas County, silver medal.

HONEY-VINEGAR.—G. M. Whitford, honorable mention; Douglas County, honorable mention.

METHEGLIN.—Aug. C. Davidson, bronze medal.

NEBRASKA FARMER SPECIAL PREMIUMS.

Display of Culinary Products with Honey Instead of Sugar.—Mrs. E. Whitcomb, 1st.

Display of Honey, Supplies, Bees and Queens.—Nebraska Commission, 1st.

Display of Designs in Beeswax.—Mrs. E. Whitcomb, 1st.

Largest and Best Display of Designs in Beeswax.—E. Kretchmer, 1st.

Largest and Best Display of Bees and Queens.—L. D. Stilson, 1st.

Best and Largest Display of Extracted Honey.—Nebraska Commission, 1st.

Best and Largest Display of Comb Honey.—Nebraska Commission, 1st.

Honey-Producing Plants.—Winnie L. Stilson, 1st.

Display of Apiarian Goods and Implements.—A. I. Root Co., 1st.

Display of Honey, Bee-Supplies and Queens.—E. Kretchmer, 1st.

◆

A Correction.—In Mr. Whitney's article on page 690 in the third line from the top of the first column, read "a flush ¼ inch" instead of 1¼.

White Comb Honey Wanted.—We are in the market for best white comb honey put up in 12 or 24 pound single-tier shipping-cases. We would like it to run about 11 and 22 pounds, respectively. If you have what you think will suit us, please write, saying how much you have, and at what price you will deliver it in Chicago. Address, George W. York & Co., 118 Michigan St., Chicago, Ill.

THE WEEKLY BUDGET

MR. S. T. PETTIT, of Ontario, Canada, wrote us Oct. 29:

"DEAR BRO. YORK:—The 'Old Reliable' has slipt a cog somehow. The last two numbers have failed to reach me, and I am all out of joint. It seems like only last week since I put my bees into the cellar last year, and now in a few days more they go in again. How time flies!"

THE MODERN FARMER AND BUSY BEE is what Editor Emerson Taylor Abbott now calls his paper. He has also changed it to a weekly, size 11x15½ inches, and 16 pages, raising the subscription price to $1.00 a year. It is a fine-looking, general agricultural newspaper now, and deserves great success. Address for free sample copy, The Modern Farmer and Busy Bee, 319 Felix St., St. Joseph, Mo.

MR. O. O. POPPLETON, of Dade Co., Fla., who has lived in Cuba, and for years in Florida, had a long article in the Florida Farmer and Fruit-Grower, for Sept. 10, entited, "Influence of the Coming Americanization of Cuba on Orange Growing and Trucking in Florida." The farm paper named is publisht in Jacksonville, Fla. Those interested can perhaps get a copy of it by sending say two 2-cent stamps to the name and address as given.

MR N. E. FRANCE, State Inspector of Apiaries in Wisconsin, has written Secretary Stone that he expects to be at the meeting of the Illinois State Bee-Keepers' Association in Springfield next week—Nov. 16 and 17—in the State House. Mr. France will help in securing, or advise how to secure, a foul brood law in Illinos similar to that in Wisconsin. There should be a large attendance at the Springfield meeting. One and a third fare for round trip on all railroads.

EDITOR LEAHY, in his October Progressive Bee-Keeper, speaks thus of the fall season and future prospects:

"Owing to the prevalence of fall rains and continuous warm weather, vegetation has a strong growth, and the fall bloom is immense. Bees will go into winter quarters with plenty of stores, and of a good quality. All this bespeaks for successful wintering of the bees in this locality, and points to a good crop for 1899."

MR. AND MRS. THOS. W. COWAN, of England, will have the sympathy of all the bee-keepers in the world when the latter learn of the great affliction that our friends across the Atlantic have met with. Our first intimation of their irreparable loss we received from reading this paragraph in the British Bee Journal for Oct. 20, which is just received:

"With the most profound sorrow we have to announce the sad news that Miss H. M. Cowan, the eldest daughter, and Mr. Herbert F. Cowan, the second son, of our senior editor, were passengers on board the ill-fated Atlantic Liner, 'Mohegan,' wreckt off the Cornish coast on Friday last, and that the lives of both were lost."

HON. E. WHITCOMB, Superintendent of the Apiarian Department of the Trans-Mississippi Exposition, wrote us Nov. 3:

FRIEND YORK:—To-day I am in receipt of a fine chair, to which was attacht a note reading as follows:

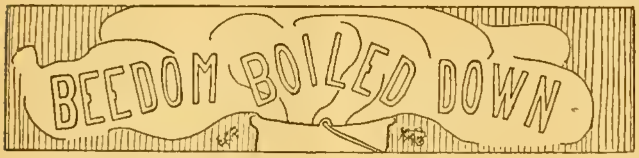
> Please accept this chair as a mark of esteem which we hold for your many kind favors while Superintendent of the Apiary Building.
>
> L. D. STILSON. E. KRETCHMER,
> G. M. WHITFORD, AUG. C. DAVIDSON,
> MRS. F. J. PREISS.

Of course, I value this chair on account of the circumstances under which it was presented, as well as the particular friends and co-workers who presented it.

We are getting the Apiary Building pretty well cleared out, and I will be away and at home early next week.

Your friend, E. WHITCOMB.

As all know, the Trans-Mississippi Exposition closed Nov. 1, after a five months' run. Mr. Whitcomb can now rest at home in that nice, new chair, and think about his summer's work. He deserves an opportunity to sit down, and also a good chair to sit in.



BEEDOM BOILED DOWN

First Bees Imported into Australia, according to information given in Australian Bee-Bulletin, were brought from England to Sydney in 1824.

* * *

Weight of Bees.—Berlepsch estimated 5,600 bees to the pound, when the bees were not filled with honey. Franz Ebster gives in Leipz. Bztg. as a result of his counting, 3,030 as the number of bees in a pound when the bees are filled for swarming.

* * *

A Prosposed Remedy for Stings.—A woman was stung in the throat by a wasp which she had swallowed with some jam. Salt was promptly applied inwardly both alone and in mixture with vinegar, and also rubbed on outwardly, and this in all probability saved her life.—Gardeners' Chronicle.

* * *

Long-Ideal Hives are discust in the Australian Bee-Bulletin. Evidently they are the same as the long-idea hives on this side the globe. In this country they were named long-idea hives because the long idea was involved in their construction. In Australia the letter "l" was added to the name either through a mistake, or else because they were considered the ideal hive, and long as well.

* * *

Accuracy, especially for beginners, is the theme of J. E. Crane in the Bee-Keepers' Review. If you have hives made at mills near by, make out a bill of pieces, and make an agreement that every piece shall be of well-seasoned lumber without the variation of ⅛ inch, or better still, 1/16. Make frames square, not even a *little* diamond shape. Top-bars not light enough to sag. Spaces around the frames exact. Foundation in the center of the frame, and hives accurately leveled so the combs will be in the center of frame when finisht. Sections, cartons, and packing-cases, especially if made by different firms, must be exact, otherwise sections may not go into cartons, or else cartons may not go into shipping-cases. Be accurate also in your knowledge, and do not think that bees will not use brood four days old to rear poor queens, or that a colony will never rear a queen in ten days after being made queenless.

* * *

Two Communities with One Queen.—A weak and a strong colony were united. A subsequent visit showed two distinct clusters, one having brood in all stages but no eggs, the other having brood, eggs and queen. A few days later the conditions were changed, the queen and eggs being in the other cluster. A distinct separation between the two clusters was formed by a quantity of freshly-stored pollen.—Schweiz. Bztg.

* * *

Strong vs. Weak Colonies for Honey.—Editor Hutchinson, in the Bee-Keepers' Review, agrees to the possibility of Dr. Miller's correctness when he says a large colony consumes less honey in a year in proportion to the number of bees than a small one, but refuses to believe that a large colony stores more in proportion to the number of bees than a small one, and calls for testimony on both sides. If that subject gets a thorough shaking up, both men will probably get some new light. Good topic to discuss.

* * *

Shirking the Tariff on Honey.—A tariff on imported honey helps to protect German bee-keepers. Living bees are admitted free. Thousands of colonies are ostensibly sent in from Holland free. A very few bees in a hive heavy with honey will serve to secure free admission, and thus much honey crosses the border without being taxt. Herr Reepen proposes that an effort be made to have a ruling that living bees be admitted free only when hives, bees and all do not exceed in weight 33 pounds.

* * *

Section-Cleaners.—J. A. Golden having said that L. A. Aspinwall's objection to belt cleaners was probably without having tried them, Mr. Aspinwall replies in the Bee-Keepers' Review that the failure of a disk, through whirling small particles of propolis into the honey, was sufficient to convince him the belt would not do. He thinks it may do by holding one edge of the section at a time on the belt, but that would be too slow work. With his improved cleaner he cleans more than 150 sections an hour.

BEST
EXTRACTED HONEY FOR SALE
ALL IN 60-POUND TIN CANS.

ALFALFA HONEY

This is the famous white extracted honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.

BASSWOOD HONEY

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is greatly preferred by those who like a distinct flavor in their honey.

PRICES OF EITHER ALFALFA OR BASSWOOD HONEY:

A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—One 60-pound can, 8 cents a pound; 2 cans, 7¾ cents per pound; 4 or more cans, 7½ cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. This honey is all

Absolutely Pure Bees' Honey.....

the finest of their kinds produced in this country.

☞ We would suggest that those bee-keepers who did not produce any honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. The pamphlet, "Honey as Food," will be a great help in creating customers for honey. See prices on another page.

GEORGE W. YORK & CO., - 118 Michigan St., CHICAGO, ILL.

To Our Regular Subscribers—Now for New Readers!

6 Great 50-cent Offers—Each One Free!!

On this page you will find six splendid premium offers, and we will mail your choice of any one of them for sending us $1.00 for **just one New subscriber** for 1899—and we will throw in the last three months of this year's Bee Journal free besides to each new subscriber you send on these offers. That makes 15 months of the Bee Journal to the new subscriber. Or, for sending us **4 New subscribers,** as above, we will mail the sender all of the 6 great 50-cent offers.

JUST READ WHAT THEY ARE:

Offer No. 1.—Samantha at Saratoga.

100,000 Sold at $2.50 per copy.

This is indeed a feast of fun, by the only peer of Mark Twain's humor—JOSIAH ALLEN'S WIFE (Marietta Holley.)

Read this Extract from the Book:

And right here, let me insert this one word of wisdom for the special comfort of my sect, and yet it is one that may well be laid to heart by the more opposite one. If your pardner gets restless and oneasy and middlin' cross, as pardners will be anon or even oftener—start them off on a tower. A tower will in 9 cases out of 10 lift 'em out of their oneasiness, their restlessness and their crossness.

Why I have known a short tower to Slab City or Loontown act like a charm on my pardner, when crossness wuz in his mean and snappishness wuz present with him. I have known him to set off with the mean of a lion and come back with the liniment of a lamb.

And jest the prospect of a tower ahead is a great help to a woman in rulin' and keepin' a pardner straight. Somehow jest the thought of a tower sort of lifts him up in mind, and happifys him, and makes him easier to quell, and pardners must be quelled at times, else there would be no livin' with 'em.

She takes off FOLLIES, FLIRTATIONS, LOW-NECKED DRESSING, DUDES, PUG DOGS, TOBOGGANING, ETC.

Opinions of Noted Critics;

"Exceedingly amusing."—Rose E. Cleveland. "Delicious Humor."—Will Carleton. "So excruciatingly funny, we had to sit back and laugh until the tears came."—Witness. "Unquestionably her best."—Detroit Free Press. "Bitterest satire, coated with the sweetest of exhilarating fun."—Bishop Newman.

Nicely bound in paper, fully illustrated, printed from new type and on fine paper. 370 pages. Postpaid, 50 cents.

Offer No. 2.—New Waldorf Cook-Book.

Over 1,000 of the very best up-to-date recipes for every conceivable variety required in the kitchen and other departments of house-keeping, by **Mrs. Anne Clarke**, the distinguisht student and instructor in culinary science, assisted by many of the most successful house-keepers in various parts of Europe and America. It gives the latest and best methods for economy and luxury at home. Just the book for the housewife or daughter. Has had an enormous sale at $2.00 a copy. 380 pages; paper bound; postpaid, 50 cents.

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Fully Illustrated—300,000 sold at $3.00 a copy.

This great work gives all the information concerning the various Breeds and their Characteristics, Breaking, Training, Sheltering, Buying, Selling, Profitable Use, and General Care; embracing all the Diseases to which they are subject—the Causes, How to Know and What to Do given in plain, simple language, but scientifically correct; and with Directions that are Easily Understood, Easily Applied, and Remedies that are within the Reach of the People; giving also the Most Approved and Humane Methods for the Care of Stock, the Prevention of Disease, and Restoration to Health. Written by Dr. Manning.

Every farmer wants this great book. 390 pages, paper bound. Postpaid, 50 cents.

Offer No. 4.—Gleason's Horse-Book.

By Prof. Oscar R. Gleason.

This is the only complete and authorized work by America's king of horse trainers, renowned throughout America and recognized by the United States Government as the most expert and successful horseman of the age. The whole work comprising History, Breeding, Training, Breaking, Buying, Feeding, Grooming, Shoeing, Doctoring, Telling Age, and General Care of the Horse. You will know all about a horse after you have read it. No one can fool you on the age of a horse when you have this book. 416 pages, bound in paper, with 173 striking illustrations produced under the direction of the United States Government Veterinary Surgeon. In this book Prof. Gleason has given to the world for the first time his most wonderful methods of training and treating horses. 100,000 sold at $3.00 each. Our price, postpaid, 50 cents.

Offer No. 5.—Music, $5 for 50 cents.

Four pieces New Sheet Music, which sell at music stores at 50 cents each—$2.00; Three years' membership in the World's Musical Association (regular price $1.00 a year), $3.00. Total, $5.00. We offer the whole thing at 50 cents.

The four new pieces of sheet music are the very latest hits of this year; are regular sheet music size and quality, but the title pages are a new style of art, viz: Illuminated Chromatic designs in five brilliant colors.

THE SONG TITLES ARE:

"Do Your Honey Do," by THEO. METZ, author of "A Hot time in the Old Town To-night." This latter piece, said to be his best, is creating a great stir, and becoming immensely popular everywhere.

"Queen of the Bicycle Girls," by the celebrated composer. OTTO LANGEY, by far the most charming Bicycle Song yet issued.

"Blossoms from Over the Sea," by the distinguisht composer, J. P. SKELLY, a very beautiful Sentimental Song.

"He's Just Like All the Men," by the renowned composer, EASTBURN. Wonderfully pleasing to the Ladies.

The World's Musical Association is an organization having special advantageous relations with the leading music publishers of this country and Europe, and being an enormous purchaser, it is enabled to supply to its members (and will do so) any music desired (at any time within the term of their membership), at such wholesale prices as are usually granted only to very large dealers.

Offer No. 6.—The Poultry-Keeper Illustrators.

The four "Poultry-Keeper Illustrators" are the greatest books on poultry subjects ever issued, and are a veritable poultry dictionary, covering the ground so completely that, having these four books, one needs scarcely anything more except "grit" to become a successful poultry-raiser. You cannot get such other books in the whole world, not even for $50 each, for they do not exist. Were they given in another form and elaborate binding and colored cuts you might think them easily worth $5 each, but what you want is not elegant printing, and in these we give you the value in information that you can make use of. They have cost much in labor and cash, but you get all this value for almost nothing. We mail the 4 Illustrators for 50 cents.

Illustrator No. 1.—Poultry Houses, Incubators, Brooders, Coops, etc., 25 cents.

Illustrator No. 2.—Artificial Incubation, Raising Chicks, Testing Eggs, etc., 25 cents.

Illustrator No. 3.—Poultry Diseases, Lice, Grapes, Moulting, Egg Eating, etc., 25 cents.

Illustrator No. 4.—Judging Fowls, Description of Breeds, Mating, etc., 25 cents.

Those offers ought to bring us in at least 2,000 new readers during this month and next. You could send in your own renewal for 1899 at the same time you send in a new subscriber, if you wish. If you do, you can select any one of the above offers free for yourself, provided you send at least **two New subscribers** at the same time. That would give you your choice of **three** of the offers—by sending your own renewal for 1899, and two new subscribers ($3.00 in all).

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BEES, HONEY, MONEY
Queens for Business.
Supplies at Bottom Prices.
"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.
J. P. H. BROWN, Augusta, Ga.
Please mention Bee Journal when writing.

HATCH CHICKENS
BY STEAM—with the simple, perfect, self-regulating
EXCELSIOR INCUBATOR
Thousands in successful operation.
Lowest priced 1st-class hatcher made.
GEO. H. STAHL,
114 to 122 S. 6th St., Quincy, Ill.
Circulars free. Send 6c. for Illus. Catalog.
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"WATCH POUDER'S AD"

SEE THAT WINK!
Bee-Supplies! ROOT'S GOODS at Root's Prices.
Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Cat-tree. Walter S. Pouder,
512 Mass. Ave.,
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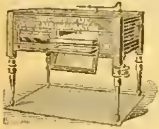

SUCCESSFUL INCUBATORS.
Hot Air or Hot Water.
A standard machine for hatching strong, healthy chicks—self regulating, patent egg turning trays, drying room under trays, non-explosive lamp—these are a few of its good points. Our 148 p. catalogue gives prices and description, also pointers on poultry buildings, etc., mailed for 6c stamps. Write for it now.
DES MOINES INCUBATOR CO., Box 78, Des Moines, Iowa.
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BEE-KEEPERS! Let me send you my 64-page Catalog for 1898
J. M. Jenkins, Wetumpka, Ala.
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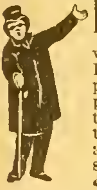

Buy Your Sections Now
while we offer them at a LARGE DISCOUNT, having added to our plant one of the most complete one-piece section machines, enabling us to turn out the most beautiful sections on the market. By sending us a list of Supplies wanted we can save you $ $ $ R. H. SCHMIDT & CO., Box 187. SHEBOYGAN, WIS.
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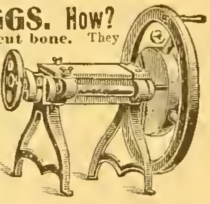

GET MORE EGGS. How?
Feed the hens on green cut bone. They will lay double the eggs right in the middle of the winter, when eggs are worth most money.
DANDY Green Bone Cutters
with or without gear are the best machines for preparing bone for fowls. Cut fast, turn easy. Catalogue and prices free.
STRATTON & OSBORNE
Box 21, Erie, Pa.
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PATENT WIRED COMB FOUNDATION
Has No Sag in Brood-Frames
Thin Flat-Bottom Foundation
Has No Fishbone in the Surplus Honey.
Being the cleanest is usually worked the quickest of any Foundation made
J. A. VAN DEUSEN,
Sole Manufacturer,
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The A. I. Root Co.'s Goods Wholesale. Retail.
Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. M. H. HUNT
Cash for Beeswax. BELL BRANCH, MICH.
Please mention Bee Journal when writing.

GENERAL ITEMS

Keeping Bees in Idaho.

I started a year ago June 10, then buying one swarm of bees—natural one—which I put into a new hive. That season I took 135 pounds of honey from it, and made two more colonies by dividing. I thought that pretty good, so I bought three more colonies in the fall, and took them through the winter all right. They were doing well in the spring, so I divided them, and out of the five colonies I increast to 12. After they were all filled up with comb and honey, I extracted, and up to Aug. 12 I took 975 pounds of honey. They have all done well since except two, which were rather weak from some cause or other, and in the latter part of September the yellow jackets workt on them so extensively that I don't think those two will live through the winter.

This section is excellent for bee-keeping, if attended to properly, but the only objection I have is, the season is so short. I have given this part of the country a genuine trial on bee-culture, and have concluded to go into it pretty extensively.

JOSEPH E. MORGAN.
Fremont Co., Idaho, Oct. 27.

From One Nucleus.

Starting with one nucleus (the freshet having taken away a small apiary a year or two previous), I had increast them the second year to three colonies, and obtained 170 pounds of section honey; the next year, to nine colonies and 275 pounds of section honey; the next year 12 colonies and 500 pounds of section honey; this year 13 colonies and 200 pounds of section honey. With the exception of one queen and a little foundation there has been no outside help given them.

This apiary is situated in the city surrounded mostly by commons, with Presque Isle Bay on the North. Nearly the whole crop of honey has been from sweet clover.

Commencing at the time the American Bee Journal was made into a weekly (1881), I have been a subscriber the greater portion of the time since. IRWIN THOMPSON.
Erie Co., Pa., Oct. 31.

Bees Did Fairly Well.

My bees did fairly well the past season, and have from 30 to 40 pounds each, to the colony, to go into the cellar with.

The American Bee Journal is well worth the price of subscription, and has been a great help to me. ALBERT G. PALMER.
Otsego Co., N. Y., Oct. 31.

Bees Did Reasonably Well.

Bees in Southeastern Nebraska did reasonably well the past season—much better than we anticipated after the season commenced. While we have not secured a large yield of honey, it is of fine quality, and the bees go into winter quarters in much better condition than for many years. We will have no honey to ship, but plenty for our home markets. J. L. GANDY.
Richardson Co., Neb., Oct. 27.

Three Seasons' Reports.

I purchast about 12 colonies of bees (mostly hybrids, but a few being the native blacks), in the spring of 1896. I moved them nine miles to my home at night. They swarmed that season, and in the fall, after losing about two colonies by death of the queens, I had 25 colonies left, 24 being quite strong, and one only four combs of bees, which lived until April and then died. This is the only one I lost, and I took off 435 pounds of comb and extracted honey.

In 1897, from 24 colonies I had an increase

Sweet Clover
And Several Other Clover Seeds.
We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Sweet Clover	.60	$1.00	$2.25	$4.00
Alsike Clover	.70	1.25	3.00	5.75
White Clover	.80	1.40	3.00	5.00
Alfalfa Clover	.60	1.00	2.25	4.00
Crimson Clover	.55	.90	2.00	3.50

Prices subject to market changes.
Add 25 cents to your order, for cartage, wanted by freight.
Your orders are solicited.
GEO. W. YORK & CO., 118 Mich. St., Chicago.

ONE MAN WITH THE UNION COMBINATION SAW
Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery
Sold on Trial. Catalogue Free.
SENECA FALLS MFG. CO.,
46 Water St SENECA FALLS. N. Y

HORSE-HIGH
Laying aside all speculation these remain as the requisites of a perfect fence. Our Duplex Automatic Machine makes just such a fence in 100 styles at the rate of sixty rods per day, at a cost for wire of only
BULL-STRONG
18c. for a good farm fence; 19c. for poultry fence; 16c. for a rabbit-proof fence and 12c. for a good hog fence. We will sell you plain, coiled spring or barb wire direct at wholesale prices. Get our catalogue before buying.
Kitselman Bros., Box 138, Ridgeville, Ind.
PIG-TIGHT
45Dtf Please mention the Bee Journal.

You Can Learn Shorthand at Home
by our perfected method of giving lessons by mail. Easiest, simplest system. Send stamp for particulars.
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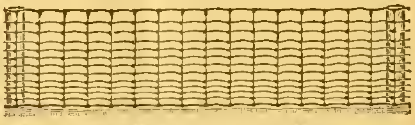
94 Dearborn Street, CHICAGO.
39A♦1 D. F. HAYMES, Manager.

COMB FOUNDATION Wholesale and Retail.
Working Wax Into Foundation for CASH A Specialty.
Hives, Sections, and a full line of Supplies. The best of everything. Write for Catalog, with prices, and samples of Foundation and Sections.
BEESWAX always wanted for cash or trade.
GUS DITTMER,
AUGUSTA, WIS.



Don't Shovel Snow
all winter from the lane, but buy Page Fence and have a clear track. No drifts behind our Winter Styles. Ask for prices.
Page Woven Wire Fence Co., Adrian, Mich.

The Bee-Keeper's Guide

This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."

Given For 2 New Subscribers.

The following offer is made to PRESENT subscribers only, and no premium is also given to the two new subscribers—simply the Bee Journal for one year:

Send us Two New Subscribers to the Bee Journal (with $2.00), and we will mail YOU a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both together for only $1.75. But surely anybody can get only 2 new subscribers to the Bee Journal for a year, and thus get the boo as a premium. Let everybody try for it. Will you have one?

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

SAVE MONEY AND FEED BY BUYING AND USING OUR **$5.00 FARMER'S FEED COOKERS**

It is low priced, not cheap. Made from the best of cast gray iron with 14 oz.-galvanized steel boiler to hold 20 gals. Just the thing for cooking feed for stock, pigs or poultry and heat water for scalding hogs. **Reliable Stock Food Cookers** are equally good but of much larger capacity. 25 to 100 gals. We will be glad to quote prices on inquiry. Do not buy until you get our free descriptive circulars. Better write for them at once.

RELIABLE INCUBATOR AND BROODER CO.
Box B2, Quincy, Illinois.

Please mention Bee Journal when writing.

Page & Lyon Mfg. Co. New London, —Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

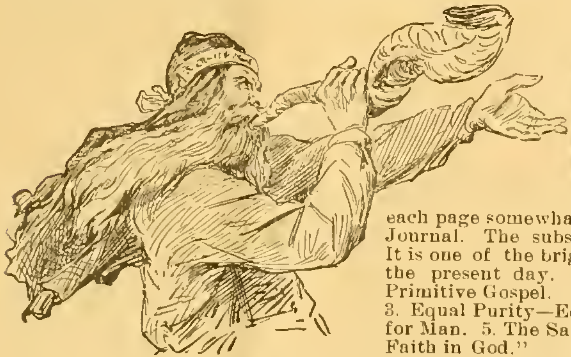
Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

Please mention the American Bee Journal. 7Atf



The Ram's Horn... Is an Independent Weekly Paper of 20 pages—each page somewhat larger than those of the Bee Journal. The subscription price is $1.50 a year. It is one of the brightest and best publications of the present day. Its "Platform" is: 1. The Primitive Gospel. 2. The Union of Christendom. 3. Equal Purity—Equal Suffrage. 4. The Sabbath for Man. 5. The Saloon Must Go. Motto: "Have Faith in God."

We will mail you a sample copy of the Ram's Horn upon receipt of a two-cent stamp.

OUR LIBERAL OFFER:

We wish to make our PRESENT subscribers to the Bee Journal a generous offer in connection with the Ram's Horn, viz: Send us **TWO NEW** subscribers for the American Bee Journal for one year (with $2.00), and we will see that the Ram's Horn is mailed you free for one year as a premium.

Or, send us $2.00 and we will mail to you the Ram's Horn and the American Bee Journal, both for one year.

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL

☛ See Honey Offer on page 714.

of seven colonies, 1,400 pounds of comb honey, and 300 pounds of extracted,

In the spring of 1898 I rented 31 colonies of bees for the half, and moved them a half mile. In April seven colonies died, so we had only 24 left—the same as last year. We have taken from the hives about 1,000 pounds of honey this year, mostly comb, and have 36 colonies in good condition for winter.

I use nothing but the 10-frame chaff hive, and think these are good, as I winter my bees on the summer stands.

I lost four queens in July, so I purchast Italians to replace them, and then thinking my bees were "running out," I bought in all 15 Italian queens, which I introduced, and I am very much pleased with them.

We get 20 cents a pound for comb honey, or $1.00 for six pounds. It sells as well as other farm produce. S. D. BARDIN.

Berkshire Co., Mass., Oct. 31.

◆

Worst Year of All.

I started with 25 colonies last spring, and bought $40 worth of hives and fixtures, and got about 100 pounds of comb honey this season, which is dark and not fit to put on the market. I have kept bees a good many years, and this is the worst year of all. I will take good care of my bees this winter, and will not let them starve. I hope they will pay next year. F. McBRIDE.

Hardin Co., Ohio, Oct. 31.

◆

Dark Honey Crop.

We had a good crop of dark honey this year, but no white honey. The linden bloomed full but secreted no nectar. Bees are in good condition for winter. I have 83 colonies, and will winter them on the summer stands. There is not much risk to run here in wintering bees, if they have plenty of stores. I never saw so much honey-dew as there was here the past summer, and the bees gathered lots of it; it was pleasant to taste, and thick, but dark. A J. McBRIDE.

Watauga Co., N. C., Oct. 24.

◆

A Queen-Breeder's Reply.

Being one of the American Bee Journal's advertisers, I hope it will allow me space to make some remarks concerning a communication from J. Hambly, beginning on page 636. It is not with the intention of getting free advertising, for it is not worth much at this season of the year, and will be forgotten ere the next season opens, but in justice to myself, as every reader who noticed my advertisement could say, as did Mr. Henry Swarting, Jr., of New York, in a communication sent as soon as Mr. Hambly's letter appeared: "It looks to me as if he sent that job at you."

During my whole experience in selling queens I have had to contend with only a few of the pessimistic class, and I guess every queen-breeder occasionally gets an order that brings forth a smile, and enables him to read the man as well as the order. The majority leave it to one's honor in filling their orders, knowing that the success of the breeder depends upon his sending out what is advertised; while others will try to secure a special selection by stating that they have ordered sample queens from a certain number of noted breeders and will patronize the one sending the best. No one expects to hear from such a person again, unless it is in the shape of a complaint.

Like Mr. Hambly, some will ask before ordering, whether one's queens are reared to sell or for business, and invariably get the reply, "for both."

For the close observer, Mr. Hambly tells too much in his letter of complaint. He says:

"A cold spell came in April, and they dwindled considerably, and six lost their queens....I sent to five different States this season for queens, and was deceived in nearly every one....I got good queens from some breeders."

Mr. Hambly should have said, in justice

26c Cash Paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **26 cents a pound — CASH** — upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

IF

IF you would like to see a picture and description of the finest honey-plant in the world, get the Bee-Keepers Review for July and September.

IF you would like to know where to find the best honey-location, to see it described with pen and picture, read the September Review

IF you are interested in knowing the methods of our best queen-breeders, and would enjoy seeing some fine engravings upon the subject of queen rearing, one of them a double-page picture, get the Review for August.

IF you would like to learn how to so group and arrange your hives that they will occupy but little space, and yet give to each hive a distinctive location, see the article and diagram on this subject in the August Review.

IF you are interested in knowing what is going on among bee-keepers across the ocean, read "Notes from Foreign Bee journals," in the Bee-keepers' Review.

IF you wish to see pointed out the errors and fallacious ideas that creep into current apicultural literature, get the Review and note the courage and ability with which Mr. R L. Taylor conducts the Department of Criticism.

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◆

W. Z. HUTCHINSON, Flint, Mich.

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to the breeders of "five different States," whether the one sent by me on May 18, soon after the considerable dwindling, was the only one that merited the honor of being put "in a strong colony" which necessitated the dethroning of one of his very best, as all had dwindled, and the others introduced to those so reduced in numbers as to become queenless; or, whether all were put in strong colonies after the freeze and dwindling. A man that cannot buy queens in "five different States" without being "deceived in nearly every one," but has stock that will build up after spring dwindling, and store quite a lot of honey considering the dry summer, should offer queens for sale.

If he bought queens for his dwindled queenless colonies in May, expecting them to build up and give a surplus, he should have said so, and no breeder of sufficient intelligence to be worthy of the name would have promist him satisfaction.

I am in sympathy with Mr. Hambly, and will return to him the price paid for the queen, if he will ask for it. He did not give me the chance to right matters, that he did the breeder of New York.

Furthermore, if any of my patrons think I failed to "toe the mark," and will state the facts in a gentlemanly, business-like manner, satisfaction will be given.

The difference in the price of tested and untested queens would indicate that no breeder would claim that every untested queen is first-class; and I have not learned how to tell about a tested one kept in a small nucleus, except in size of queen and color of progeny, as one has to be kept in a full, *strong* colony to be able to judge of her prolificness; and all practical apiarists know that some fine-looking queens reared in the natural way are worthless.

I am ready to join the American Bee Journal in exposing all frauds, and it can get assistance from the National Queen-Breeders' Union in exposing all crookedness obtainable concerning both queen-breeder and buyer. W. H. PRIDGEN.

Warren Co., N. C., Oct. 17.

Very Good Season.

The past year has been very good with me, but not quite so good as last year, but I think it is partly my fault, as I transferred all my bees (32 colonies) in the spring to 10-frame hives, then increast them to 58, and extracted 7,200 pounds this season. In September I tried rearing queens, *a la* Doolittle, with splendid success, for I got 10 out of 12, and increast to 72 good colonies. I attended to 22 colonies for another man for the half, and got 2,200 pounds comb honey, or 1,100 pounds for my share.

Without any bragging, the American Bee Journal has been worth $25.00 a year to me.

W. A. MOORE.

Salt Lake Co., Utah, Oct. 26.

Why Do Italians Store Best Honey?

On page 646, appears the discussion between Mr. Hart and Mr. Bevins again. The matter in question, if I do not mistake, is, Why do Italian bees store a better quality of honey than do the blacks, both having access to the same source? To me this seems to be an important question, and should not be ignored, for with me it is a settled question that the Italians do store better honey than do the blacks, both having access to the same sources—not to the same source only, for in this locality bees seldom work on only the one source at one time, and under such conditions the Italians store better honey than do the blacks. Now, is not that alone interesting enough to cause the question Why?

I do not know why, but would like to ask Mr. Bevins if he is able to tell why. Is it because the lighter honey they gather is not so sweet as is the darker? or, is it the blacks are more fond of pollen than the Italians, hence gather the darker honey which has more floating pollen in it? or, is it because the blacks have longer tongues than the Italians, and after the light honey which was easy to get has been taken by both the Italians and blacks, the blacks keep on gathering the darker, which is now at the very bottom of flower-cups, and mix it with the lighter already stored, hence makes the whole look darker!

Still more interesting would be the case should the Italian bees gather lighter honey from one and the same source only, than do the blacks. This of course I do not know, but suppose there is some one who does know, and is willing to tell us all about it; then let us who do not know listen to him awhile, and if he gives sufficient proof that what he says is true, let us thank him for his kindness; and if he gives us theories based on sound reasoning, let us criticise his theories in such a manner that we may be benefited by them.

AUGUST C. F. BARTZ.
Chippewa Co., Wis.

Busy Extracting.

Bees have done well here this season, which has been the best for surplus honey since 1895. I am too busy extracting to write more this time. T. H. WAALE.
Clarke Co., Wash., Oct. 24.

Prefers T Tins.

My honey crop was about 25 pounds to the colony. I am using T tins, and would'nt have pattern-slats, or section-holders.

J. LESLIE DUNHAM.
Marshall Co., Ill., Oct. 28.

Convention Notices.

Colorado.—The Colorado State Bee Keepers' Association will hold their annual convention Nov. 30 and Dec. 1 and 2, 1898, in the State Capitol Building, Denver. The Horticulturists meet Nov. 28, 29 and 30, our first day being their last. This arrangement will give members of both a chance to attend the other's meeting and discuss common interests. R. C. AIKIN, Pres., Loveland, Col.
F. RAUCHFUSS, Sec., Elyria, Col.

Ontario.—The annual meeting of the Ontario Bee-Keepers' Association will be held in Guelph, Dec. 6, 7 and 8, 1898. Owing to the Guelph Fat Stock Show, the Guelph Poultry and Pet Stock Show, and the Experimental Union meeting on the same dates, there will be a large meeting of bee-keepers, and each association will be a help to the other, as many are interested in all the different meetings. All are cordially invited to attend the meetings. W. COUSE, Sec.
Streetsville, Ont.

Illinois.—The Illinois State Bee-Keepers' Association will hold its 8th annual meeting at the State House in Springfield, Nov. 16 and 17, 1898. We will have the advantage of one fare and a third for the round trip—open rate—along with the Odd Fellows, whose meeting is the third Tuesday of November. Our Association has been petitioned by the Northern Illinois Bee-Keepers' Association to take the proper steps to secure the same foul brood law for our State as that of Wisconsin. Excellent board is secured at 25 cents per meal and lodgings just as reasonable. The one dollar for membership fee also entitles you to the American Bee Journal for one year.
Bradfordton, Ill. JAS. A. STONE, Sec.

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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Oct. 18.—Fancy grades of white comb honey sell freely at 13c, with good grades from 11 to 12½c, according to finish; ambers bring 8 to 10c, with dark, mixt and unclean, 7 to 8c. Extracted, white, 6 to 7c; ambers, 5 to 6c; buckwheat, 5c. Beeswax, 26 to 27c.

The market is active and nearly all consignments are sold soon after arrival.

R. A. BURNETT & CO.

San Francisco, Oct. 26.—White comb, 9½ to 10½c; amber, 7½ to 9c. Extracted, white, 6¾ to 7¼c.; light amber, 6 to 6½c. Beeswax, 24@27c

There are no changes to record in quotations, but market is firm at the ruling figures. Stocks are light, particularly of choice extracted. A shipment of 309 cases went forward the past week by sailing vessel for Liverpool.

St. Louis, Sept. 9.—Fancy white comb, 12 to 12½c.; A No. 1 white, 10 to 11c; No. 1 white, 9 to 10c.; dark and partially-filled from 5 to 8c, as to quality. Extracted in cases, No. 1 white, 6 to 6½c; No. 2, 5½c; amber, 5c; in barrels, No. 1 white, 5½c; amber, 4½ to 5c; dark, 4 to 4½c. Choice Beeswax, prime, 24c; choice, 24½c. At present there is a good demand for honey. WESTCOTT COM. CO.

Kansas City, Sept. 9.—Fancy white comb, 12@13c; No. 1, 11@12c; amber, 10@11c. Extracted, white, 5½@6c; amber, 5@5½c; dark, 4½@5c. Beeswax, 22@25c.

The receipts of comb honey are larger.

C. O. CLEMONS & CO.

Boston, Sept. 30.—Our honey market shows a decided firmer tone since our last. A few sales have been made at 15c for an extra fancy lot, while almost all sales ranging from A No. 1 to fancy now are made at 14c, while occasionally, something a little off, will bring as low as 12½ to 13c. We do not look to see any lower prices.

Extracted, Florida, in barrels, mostly 6c to 7c, with a good demand. Beeswax, slow sale at 26c for best. BLAKE, SCOTT & LEE.

Indianapolis, Oct. 3.—Fancy white comb honey, 12 to 12½c; No 1, 10 to 11c. Demand fairly good. Tar-colored comb honey, 8 to 9c, with almost no demand. Clover and basswood extracted honey, 6½to7c Beeswax, 25 to 27c.

WALTER S. POUDER.

Milwaukee, Oct. 18.—Fancy 1 pounds, 12½ to 13c; A No. 1, 12 to 12½c; No. 1, 11 to 12c; No. 2, 10 to 10½; mixt, amber and dark, 8 to 9c. Extracted, white, in barrels, kegs and pails, 6½ to 7c; dark, 5 to 5½c. Beeswax, 26 to 27c.

This market is in good condition for the best grades of honey, either comb or extracted. The receipts of the new crop are very fair, and some of very nice quality. The demand has been and continues to be very good, and values are firm on fancy grades and straight, uniform packing. A. V. BISHOP & CO.

Buffalo, Oct. 20.—This market is much improved in demand on all grades. Strictly fancy 1-pound comb, 13 to 14c; No. 1, 11 to 12c; dark, etc., 7 to 9c. Fancy extracted, 5 to 6c; dark, 4 to 4½c Fancy beeswax, 27 to 28c; poor, etc., 20 to 25c. BATTERSON & CO.

Columbus, O., Oct. 29.—Fancy, 14 to 15c; No. 1, 12 to 13c; No. 2, 10 to 11c; amber, 9 to 10c. Receipts somewhat heavier, but demand improves as weather gets colder.

COLUMBUS COM. AND STORAGE CO.

New York, Oct. 22.—Receipts of comb honey are large, and there is quite a stock now on the market. While white is in good demand, buckwheat and mixt seem to be somewhat neglected, and quotation prices have to be shaded in order to sell in quantity lots: We quote:

Fancy white, 13 to 14c; No. 1 white, 11 to 12c; amber, 10c; mixt and buckwheat, 8 to 9c. Stocks of extracted are light of all kinds. Demand is good at following prices: White, 6 to 6½c; amber, 5½c; dark, 5c. Southern, in half barrels and barrels at from 55c to 60c a gallon. Beeswax dull at 26c.

HILDRETH BROS. & SEGELKEN.

Detroit, Oct. 20.—Honey in better demand and better prices as follows: Fancy white, 13@14c; No. 1, 12@13c; fancy dark and amber, 10@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

Cleveland, Oct. 27.—Fancy white, 13@14c; No. 1, white, 12@12½c; light amber, 11c; buckwheat, 9c. Extracted, white, 7c.; light amber, 6c. A. B. WILLIAMS & CO.

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The Ohio Farmer and Gleanings in Bee-Culture
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We will send the Ohio Farmer, a dollar weekly, one of the leading agricultural papers of the United States, and Gleanings in Bee Culture, both for one year, to a new or old subscriber, for $1.10, **paid in advance,** and all arrearages to Gleanings, if any, squared up.

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The Ohio Farmer is a larger paper, and is issued weekly, and is one out of a few really good farm papers.

The Poultry-Keeper is monthly, edited by P. H. Jacobs, and publisht at Parkesburg, Pa. It has a tinted cover in two colors, and is beautifully gotten up.

Remember that, in order to secure any one of these three papers, in combination with Gleanings, the money must be paid in advance, and arrears to Gleanings, if any, squared up. These offers are very low, and will be withdrawn soon.

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38th Year. CHICAGO, ILL., NOVEMBER 17, 1898. No. 46.

CONVENTION PROCEEDINGS

UNITED STATES BEE-KEEPERS' UNION.

Report of the 29th Annual Convention Held at Omaha, Nebr., Sept. 13-15, 1898.

DR. A. B. MASON, SEC.

[Continued from page 708.]

SECOND DAY—FORENOON SESSION.

The next on the program was a paper from Dr. C. C. Miller, which he read as follows:

Bee-Keepers and Supply Manufacturers.

Supply manufacturers and dealers cannot exist without bee-keepers, and bee-keepers would have a good deal harder time without those who make and sell bee-supplies. So there should be the most cordial understanding between them. What better place to encourage such understanding than at a convention like this, where both meet face to face? I believe manufacturers are anxious to know just what will best meet the needs of bee-keepers, that being to their own interest, so let each bee-keeper make known what he desires different, and if his desire cannot be met he may at least have the satisfaction of knowing why it cannot be met. On the other hand, it is possible that manufacturers and dealers may make some suggestions for the benefit of those who order from them.

By way of introducing the subject, and with no thought of covering any great part of the ground, I may be allowed to say a little as to what I might like, or dislike, from a bee-keeper's standpoint.

I remember a time when I received—I think five was the number—large, heavy boxes filled with material to be put together. I opened one, finding part of the pieces I wanted, but not all. There was no means of knowing whether the parts wanted might not be in the bottom of the box, so almost the entire contents had to be emptied. Not until the fifth box was opened were the proper parts found. Understanding that there was scarcely room for the boxes in the room where they were, and that it was heavy work moving them around, you may appreciate the situation. The moral of it is, that it will be well in sending out goods to have in

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Exhibit of the Nebraska Commission in the Apiary Building at the Trans-Mississippi Exposition at Omaha.

mind not merely the convenience of packing, but to have some regard for the convenience of those at the other end of the line.

It would be unfair not to make grateful mention of great advance in this direction. The last considerable shipment of supplies I received was a lot of shipping-cases. It wasn't this year! Each package was complete in itself, containing all the parts needed for so many shipping-cases, there was no need to open another package till all in that had been used up, just the right amount of each kind of pieces, the right number and the right kind of nails—I tell you, it was a real pleasure to know that some one had been studying, not how to get through with his job in the easiest way possible, but to make my job as pleasant as possible.

One of the great evils is the trying to have everything at as low a price as possible, without regard to lasting quality or permanent value. Just so the price is low. I don't know whether bee-keepers or manufacturers are most to blame for this. The result is some tendency toward sham and shoddy.

Another evil running parallel with this is, going to extremes with the matter of uniformity.

It's a good thing to have goods at low prices, and it helps toward this to have only one variety of an article for all, but it's carrying the thing a little too far when a standard article is so cheapened in price that it becomes flimsy, and thus dear in the long run, so that those who want a good article, and are willing to pay for it a fair price are obliged to pay an extra price because of having goods made to order. Instead of catering to the desire for extremely low prices with little regard to real value, it might be to the interest of all concerned if manufacturers would do their pushing in the direction of better goods at fair prices.

I want a good frame with metal spacers, and I am told such a frame cannot be on the regular list because such spacers would be in the way of the uncapping-knife, and altho I work entirely for comb honey, and altho frames in the brood-chamber are less and less used for extracting, yet for the remote possibility that some time I may change my plans and want to use brood-combs for extracting, I am told that such frames as I want would break in on entire uniformity, so I must fall in line and use frames I don't want and don't like, or else pay an extra price as a penalty for varying from the standard. I submit that's carrying uniformity a little too far.

A good many believe—and perhaps no one disputes it—that the most satisfactory hive-cover, and the cheapest in the long run, is one covered with tin. Will you show me such a cover listed in any catalog? Those who want them and will have them must pay the extra price for varying. Would it not be a wise thing for manufacturers to encourage, rather than to discourage, what they must believe for the best good of bee-keepers, by putting such goods on their lists, even if the price must be high? Give us the chance, at least, for getting the best goods, if we are willing to pay the price, and encourage beginners to get what will be the cheapest in the long run.

Now that's enough to start on, and I'll listen to what others desire, and especially to what manufacturers and dealers desire on the part of bee-keepers. C. C. MILLER.

A. I. Root—In regard to the idea of marking on the outside of packages what is on the inside, I know that I did a good deal of scolding about that a couple of years ago. Almost all kinds of our supplies now have a list on the outside of the package, indicating what is inside. The modern way of putting up goods is to put a printed slip on the outside indicating what is inside. That can be done very easily by having a printed slip for regular goods. Certain things we put up in regular packages so they can be put up in quantity, and then these goods are markt on a printed list and the printed list can be gummed on the outside of the package. We can easily do that when the goods are regular, but when somebody orders something special, or orders goods modified in a special way, it is harder. During this last season, when there was such a rush, I am afraid our folks were not so exact about that, to stick to that plan of marking the goods on the outside of the cases.

Mr. Masters—I would like to give the supply dealers an idea or two. I have been buying supplies for the last ten or a dozen years, and there is one thing I have always objected to, and that is putting the heart side of a board inside. I want the heart side of a board outside. I often have covers come to me with the heart side below.

A. I. Root—From our place?

Mr. Masters—Yes, sir; from your place. It is almost impossible to keep them from springing. I have thought that I would write to the manufacturers in regard to the matter, but I have not done it. I think this is just the place to speak of it. That is the main complaint I have to make. I hope you will reform and not do it again.

Dr. Miller—There is one little item that I want to speak about—I think all bee-keepers will appreciate it: I mean the item of nails. I get some goods and I don't know, to begin with, the kind of nails I should have. When I have found out the kind of nails I should have, when I go to the hardware store perhaps I can't find the right kind there. And if I do find them, I don't know how many I want, and I will likely get more or less than I want, and may be I will get the goods partly made up and then have to wait until the next time I go to town, or else make a special trip. When you can be sure of getting just the right kind of nails, and just the right number, and all ready to be used, it is a big thing. It is that sort of thing that I am glad to see the manufacturers are looking after. They are doing these things, as I said in my paper, and as I thoroughly believe, not because they are good men, but because they want to make money out of us fellows who are buying, and they are trying to do the best they can for us. They are wise in their generation. If any of you can think of something you want them to do for us, just tell them. They are not doing as much as they ought toward making a demand for better goods. They are rather catering to the demand for low-priced goods, and that is too apt to mean shoddy goods.

Mr. Westcott—I have no kick to make at all on the manufacturers, excepting once in awhile. That is, as a general thing I receive good goods whenever I order; but once in awhile when I write for a half dozen or a dozen hives, I find there will be an end that is not good, while the rest will be perfectly good. It is a good deal of work for a man to go to work and make a hive end or a side. So far as the nail question is concerned, I don't think that amounts to anything. I think all of us can buy nails enough to have plenty on hand.

Dr. Miller—About those bad pieces of wood: Sometimes I have a package of stuff for 500 frames, and I go to work making them up. Here is a bad piece, here another bad piece. I lay them all aside, and by and by I have enough bad pieces to make a bad frame, and I don't make it. [Laughter.]

A. I. Root—We have an inspector who is a very careful man. If he has any fault, he throws out stuff that is too good to throw away. I have enjoined the boys to keep the quality of the goods up; if other manufacturers want to make cheap goods, let them do it. The boys sometimes think it is a pretty hard state of affairs to let other parties cut below our prices and take orders out of our hands. What shall we do? Shall we put in poor stuff in order to meet competitors' prices, or shall we hold up the quality of the goods? If there is anything that I insist upon more than another it is that we want to keep up the quality of the goods. Cheap John goods don't pay. If I was ever on the other side of the question, I beg pardon.

Mr. Danzenbaker—I would like to say a word about No. 2 sections. There are a few dealers in the country who are buying these sections and selling them as No. 1, and the people who buy them think they are buying No. 1. That reflects upon the manufacturer. The dealer buys them from the manufacturer as No. 2, and then sells them for No. 1, and charges No. 1 price. I know several men who are doing it. Then there was something said about nails. I agree with Dr. Miller about the nails. I think that is one of the greatest favors the manufacturers do us. I live in a large city, where there are large hardware stores, and sometimes I have gone to half a dozen stores without finding the size and kind of nails I wanted. Where I did find them, I would find that I must buy a whole pound, when I only wanted a few. Out in the country towns where there are only one, two or three stores, you might not be able to find nails at all of the right size. And if you undertake to nail up the hives or frames with nails that are not of the right size, you are apt to split and ruin your stuff. Only sometimes the nails sent are a little scant. In putting up ten hives, I have lackt just enough for one hive.

Dr. Miller—My experience is rather the reverse of that. I am getting ready to set up a hardware store of my own with the extra nails I have accumulated. They always send me a great many. I think very likely Mr. Danzenbaker enjoys driving nails pretty well.

Mr. Acklin—In St. Paul and Minneapolis it is almost impossible to get nails of the right size. The nails we get there would split any kind of hive-stuff. A great many of our customers have spoken of what a great satisfaction it was to have the nails sent with the goods. Some have spoken of a shortage, and we would find out that they had put in more nails than were called for on the printed slips of directions.

Mr. DeLong—I want to ask if there is any difference between the ordinary commercial nails that are purchast at the hardware stores, and the nails that the manufacturers of supplies send out?

Dr. Miller—Yes, sir.

Mr. DeLong—A neighbor of mine said the nails were galvanized, or had gone through some process that prevented them from rusting. Nails that will rust in the hive lose their efficacy in holding the hive together, and of course a bee-keeper who puts up a good hive out of good material should put in good nails so as to keep the good things all together. I think the bee supply companies would be a good place for the bee-man to buy his nails. I want to say in regard to the supply men, that I think they are a blessing to the fraternity. They are helping to make bee-keeping more easy, and are helping to elevate the business.

Dr. Miller—I want to make an apology. Not so very long ago there was put before us what I think Mr. DeLong has referred to—that is, what were called cement nails, with a covering of cement to make them hold tighter. I said there was no need for them—that we could get the same effect cheaper—just rust your nails and they will hold tight. After getting some of the cement nails, I wanted to take that back. They are away ahead of ordinary nails. You can put in a nail so small that it won't split the wood at all, as an ordinary smooth nail would, and the cement nails will hold much tighter. It is cheaper in the end to use the cement nails; they cost a little more per pound, but you get more to the pound, as you can use a smaller nail. I have gone through the wholesale and retail hardware stores in Chicago for the right kind of nails without finding them; then I sent to the manufacturers of bee-supplies and I would get the right kind. You cannot get the right nails in the large places, let alone the small places. It is a big thing to get the right kind of nails. If you have never tried the cement nails, try them and you will be convinced.

E. R. Root—I want to say a word in regard to the use of wire nails and cut nails. Wire nails won't draw the boards up together; cut nails will. Wire nails won't hug the boards close, but cement wire nails will draw them up tight. Sometime ago the thought occurred to us that we wanted to make a better hive, and we put the price up, as we also did the quality of the material. The growth of our business has shown us that the people appreciate that we want to make better goods, even if we have to charge higher prices. Last season we had more business than we could possibly take care of. We endeavor not to put knotty or shaky boards in our hives. We are endeavoring to give the bee-keepers what they want. We are anxious to see what changes and what improvements can be made. Last year I traveled a great deal, and nearly every year I go around among the bee-keepers and see what they want. We want to know how we can improve our goods. Words of intelligent criticism are what help us supply dealers. In regard to marking packages, we have a rubber stamp for marking, but in the rush of the busy season we leave that stamp off of some of the packages, probably. I presume that some get goods without being stampt. We intend to put stamps on all packages, indicating the contents of the packages.

Mr. Masters—There is one thing in reference to the nail question that I wish to say, that has not been said yet. I find that the nails that I get from Mr. Root—and I presume I would probably find the same thing with those furnisht by other manufacturers—have points. They are sharp-pointed, and will stick in. You stick in a nail and it will stay where you put it until you strike it. If a man has to hold a nail while he gets it started, it is a great inconvenience. These pointed nails I have found to be a great advantage in putting hives together, especially with the smaller nails. I consider cement nails a great advantage. I have found out that the nails hold much better. I have sometimes had to drive boards apart that had been nailed together, and with the cement nails I have found that sometimes the head of the nail would pull through the wood rather than let the nail draw out. It is a great advantage to have nails that will hold, and sharp-pointed nails.

A. I. Root—Some one has said that the cement nails are cheaper, and they are cheaper for this reason: A smaller nail of this kind will hold better than a larger nail that is not cemented.

Mr. Lathrop—Perhaps I am the only man in the room who ever thought of such a thing, but I wish the supply dealers would use different nails for nailing up cases and boxes. They nail them up as if they never expected them to be opened again. I would like them to use short, smooth nails for nailing up shipping-boxes—any boxes that contain supplies. Sometimes the bee-keeper has to tear the cover of the box all to pieces, for the packers have used too many nails, or the nails are so long they won't pull out. An ordinary amount of nails will hold a box together while it is going from the factory to the bee-keeper, and he can open it without destroying the boards.

Dr. Miller—I think the manufacturers should, when they send out a case of goods, nail it securely. Sometimes I think there are not fastened up tight enough.

Mr. Danzenbaker—Stuff shipt to our part of the country can hardly be nailed too tight. The boxes get handled very roughly by many of the colored freight-handlers. I have several times had goods lost by their not being nailed up strongly enough. I would rather have ten boxes nailed up too strongly than one that is not nailed strongly enough, and is broken apart.

Dr. Miller—I believe I have had the same feeling that Mr. Lathrop has. I suppose it is a hard matter to know how to fasten up packages. It makes me feel badly to have to split a nice cover all to pieces, but I suppose it is a difficult thing to do to strike just the right medium.

Mr. Danzenbaker—I use a nail-puller, such as dry-goods men use in opening boxes. I can draw the nails out and save the covers without breaking them.

Mr. Spaulding—I went into several hardware stores hunting for them, and the hardware men said they didn't keep cement nails at all. The traveling men on the road wanted to sell them to them, but couldn't. The hardware men said carpenters wanted nails that they could hold in their mouths, and that the taste of the cement nails was objectionable.

E. R. Root—The ordinary hardware dealers do not seem to know of the cement nails, but they will after awhile.

Dr. Miller—Is there anything in the covering of those cement nails that is injurious?

E. R. Root—It is only a preparation of tar.

Mr. Rauchfuss—As the supply manufacturers seem willing to hear a little criticism, I believe this is a good time to say something about the way hive-bottoms are made. We get bottoms frequently that are in two pieces, and in our dry climate they shrink apart and leave quite a big crack. I would like to have the bottoms always in one piece. With the bodies of the dovetailed hives, if they are made of lumber that is not thoroughly seasoned, and if they lie in our locality for a few months without being made up, it is almost impossible to put them together without splitting. The dovetails will not fit any more.

Mr. Hatch—I would like to say one word against poplar shipping-cases. They do not look good; they do not ship good, and I do not think they are good. They split, and don't present a good appearance. I would rather have pine than poplar any time.

At this point it was moved, seconded and carried that the regular business of the convention be closed with to-night's session.

Ex-Gov. Alvin Saunders, of Nebraska, an old-time bee-keeper, and the only war governor of Nebraska now living, was then introduced to the convention by Pres. York, and spoke briefly as follows:

SHORT ADDRESS BY EX-GOV. SAUNDERS.

I did not come here to teach anybody. I want you to understand that I am here as a scholar myself, and a pretty new one at that. I take a great interest in this work that is in the minds of those who are here. I should have liked to be with you from the beginning of your proceedings, but I regret that I have been busy with some other matters which made it impossible.

I have never attended a meeting of persons connected with this kind of work that I did not find some pretty good citizens, and I feel myself honored to be associated with this class of people. I have a little farm and have some bees on it, and produce a little honey for our own use, and may be for the use of my neighbors, sometimes; but I don't boast of that at all. I know very little about the business. I am only a scholar myself, as I say, and am here to be taught by others, rather than to try to teach you; therefore, I shall not try to teach you, but shall just simply try to thank you for the good your visit has done me. We are glad to see you. Many States are represented in this meeting, and we of Omaha are proud of that, and we are proud of the character of the men who represent our own State. You have never seen a Nebraskan who was not proud of his State.

Dr. Mason—Nor an Ohioan, either.

Mr. Saunders—No, nor an Ohioan. When we Nebraskans want to get office, we go back to Ohio for it. [Laughter.]

Dr. Mason—W. J. Bryan didn't go to Ohio, and he got left.

Mr. Saunders—Now I came here, as I say, to gather information from you. When I go home, my folks will say that

I have been at the convention, and that I ought to be able to teach them. But I have nothing to say to you beyond thanking you for being here, and for giving me an opportunity of making your acquaintance, as I hope I shall do with some of you who are in this line of business, which I know is honorable, and which dates back thousands of years, when they tell us that honey was good, and when the comb was as sweet as it is now, I suppose. It is a business which is probably as long in the hands of the people as any other business on earth; so we feel now that we have got nothing new—that we are not experimenting with something that is entirely new, and belonging to this century, but something that is old, and that has been brought down to us from antiquity. And this business seems as much the women's business as it is the men's. I think the women do more to cultivate and help it along than the men do, and therefore I say it is a woman's business rather more than a man's. I say to our people, "It is your business, not mine. I will take the honey, but taking care of the bees is your business." [Laughter.]

Well, I must say again that I am gratified to be here, and gratified to see so many of you here at this convention. I hope you will enjoy yourselves while you are here. We have some good men connected with this business in our own State, and I hope you have made their acquaintance, too. You can rely upon it that they will do all they can to make your visit pleasant, and the rest of us will try to do the same thing. [Applause.]

Pres. York—I am sure we all appreciate the kind words of Gov. Saunders. He is the only war governor of Nebraska now living, and a man whom it does us good to meet and to have speak to us.

[Continued next week.]

CONTRIBUTED ARTICLES

Fertilization of Flowers—Should Bee-Keepers Pay for It?

BY G. M. DOOLITTLE.

A short time ago, when at our country store purchasing supplies for household use, a somewhat miserly farmer abruptly stept up to me and said:

"Mr. Doolittle, I want you to bring me up 10 boxes of honey to pay for what your bees got from my buckwheat field when it was in blossom. There were thousands of your bees there at work on that field, and I think it no more than right that you bring me 10 boxes, and 100 would be more nearly the amount it would take to make me good."

While he was thus saying, the reply I should make was telegrapht to my brain like a flash, so as soon as he had done speaking I said:

"See here, Mr. P., I have charged to you on my book account $25.00 for the use of my bees in fertilizing the flowers upon that buckwheat field, and when you come down to pay me what you rightfully owe me, I will make you a present of 10 boxes of buckwheat honey."

It would have done any apiarist good to have seen him open his eyes and mouth at the same time, and after his astonishment had somewhat subsided, he askt, "Do you really think that your bees helpt my buckwheat field any?"

"Most assuredly I do," was my reply; "and I wish to tell you that there is not a particle of doubt that the *great* and *first* purpose for which bees were created was for aiding in the fertilization of flowers of different kinds; the honey part as a food and as a delicacy for man, coming in as secondary, altho but few think of the matter in this way.

I saw at once that I had created an impression on his mind which would be twice as lasting as would have been the 10 boxes of honey had I given them to him; and I advise every bee-keeper, when they see some one who appears to be a little jealous regarding bees working on the flowers on their land, to preach this truthful doctrine to them. Yea, preach it every time you get a chance, as I did a few years ago while riding on a crowded stage-coach some distance from home.

One of the passengers began a tirade against the bees of a certain bee-keeper who lived in his vicinity, telling how they were injuring the fruit in his section, and how the farmers about him could not secure a large yield of buckwheat, very often, on account of the bees kept by this man sucking out all of the honey nature provided for the maturing of this grain while the berry was in the embryo form in the blossom.

When he had finisht speaking he showed by his countenance that he thought his wisdom along these lines much superior to that of the other passengers; and from different remarks it appeared that the most of those about him endorst what he said. There was no one in the stage whom I knew or who knew me, so I saw that I had a chance to correct a wrong impression without being accused of selfishness on my part; consequently, in substance, I said that I did not consider the ideas advanced by the gentleman as sound; that I believed the honey was placed in flowers for the *express* purpose of enticing them to plants whose flowers needed the bees for fertilization purposes. To this end, I continued, we find honey, or nectar, secreted only in such flowers as are incapable of self-fertilization; while those capable of being fertilized through the agency of the wind, etc., secrete no nectar to entice the bees.

As an example, we see wheat, oats, barley, corn, and certain grasses, all capable of being fertilized by the rustling of their stalks by the gentle breeze, and none of these secrete honey, as all of you know, altho there are a few who claim that bees secure honey from corn. Then there are all of the clovers, all of the squash and other vine family, buckwheat, and nearly all fruit-bloom, none of which are capable of being fertilized through the process applicable to the first. All these last named, secrete honey for the sole purpose of enticing bees, flies, etc., for their fertilization, so that they may mature seed that the species may be perpetuated. And the same thing holds good with the trees of the forest, hence the claim put forth by some, that the bees injure fruit by taking nectar out of the blossoms, is a false one.

I then told them of the law a few jealous persons succeeded in getting past in a township in Massachusetts, banishing bees from that town; how the result was that little or no fruit developt in the interior of that township, while all along the boundary fruit was as plentiful as ever; and that, after this experience regarding their folly, they were glad to welcome the bees back again, when they again had fruit as formerly.

I also told them of the importation of bumble-bees into Australia so that the seed of red clover might be raised there—a thing which was impossible to do till after these bees were imported; of the noted squash culturist, Gregory's experiments, by tying netting over the blossoms, when not a squash would mature, unless hand-fertilization was resorted to. I also gave other illustrations, when I had all (except the man who hated his neighbor so badly, and through him his bees) converted to my side of the question, and him looking very sheepish in the matter, without even a word of reply to what I had said.

When men plead that bees injure fruit and grain by taking away the saccharine matter secreted for and needed by the fruit and grain in its development, they show their ignorance, and it is the duty, as well as privilege, of every bee-keeper to dispel this mist of ignorance which is generally begotten of jealousy. And unless we look well to this matter and educate in every place, and as often as we can, the day may yet dawn when we may be obliged to pay in honey for the part our bees play in the fertilization of flowers, as was demanded of me by the farmer.

Onondaga Co., N. Y.

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Preparing Bees for Winter—Sunflower Smoke.

BY J. A. GOLDEN.

Our fall honey-flow has just closed, and all hived bees are well provided with winter stores, but it requires vigilance to keep the wood's bees from cleaning out whole apiaries. There are quite a number of trees within a few hundred yards from us, containing bees, which cannot be secured, tho a number have been cut by our sports.

I am now preparing my bees for winter, and will give the method I use, and if there is any better wintering method I would like to read it through the American Bee Journal.

At the close of the fall flow all supers and fixtures are removed and stored away, and each colony examined to see that it has a queen. Then I properly equalize the stores by exchanging frames, or a quick feed of thick syrup of white A coffee sugar, after cleaning the bottom-board and placing a 1½-inch high rim on the bottom-board wide enough to close the side-entrances of the hive, when the hive is set on, giving a dead-air space.

I scatter a teacupful of slackt lime on the bottom-board, which absorbs all dampness of the hive and bees during the cold season. This item alone is worth many dollars to the apiarist, if observed. Bees and combs are well sprayed with a mild solution of salt-water with an atomizer; the combined cover and feed receptacle is placed on the hive, then a half-body rim in which packing is placed; then I place on the outside cover. Thus my bees go through our coldest winters, dry-shod, and come out in the spring clean and bright—no diarrhea nor dwindling from a foul or turbid hive.

In this method the bees, first, are insured against dampness; second, they have sufficient space for old bees that die; third, bees and combs are treated with a cleansing bath of salt-water; fourth, have ample ventilation; fifth, can be fed at any time without molestation—nothing equal to it for stimulating the queen for early breeding.

SMOKING BEES WITH SUNFLOWER.

Yes, Mr. Moore (page 595), I was aware that stramonium was of a narcotic nature, and that's why I was led to try its effect on those high-toned bees. But, say, Mr. M., your good wife didn't propose to smoke the stramonium to her injury or death? Of course not, unless she wisht to commit suicide. Likewise bee-keepers don't propose to smoke their bees to death. A little smoke properly applied is humane; a great cloud of smoke blasted upon bees carelessly is inhuman; therefore, a little puff or two of sunflower or stramonium smoke has the greatest controlling power on bees of any smoke I have ever known. Try it, Mr. Moore.

Morgan Co., Ohio.

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No. 2.—The Care of Bees for Wintering.

BY C. P. DADANT.

In a previous article, I stated, as a *sinc-qua-non*, that a colony, to winter well, should contain a sufficient number of bees. I am now reminded that I did not say what this number should be. It surely would be very difficult to state this in thousands or tens of thousands, and if I could do this it would be no better than so many hieroglyphics to most of my readers—I might say to all of them, for no one can make even an approximate guess at the number of bees a hive contains.

It will be much easier to say that I would have bees on not less than five combs when they are clustered, or imbricated together, on a frosty morning, and the clusters should extend for over one-half of the length of the combs. A strong colony, in a very good season, often covers the greater part of its combs below the honey, and it is a very good sign when you raise the super, or the cloth, or the honey-board, from the body, to see the bees clustered a little way down from the top of the combs. At the bottom they will, if healthy, reach clear down to the alighting-board, and will be on the alert at a minute's notice.

The hive had best be reduced to the size of the colony, for it is worse than useless to have a lot of empty comb, perhaps containing neither bees nor honey, at one side or the other. For this reason, with the large hives that we use, we always have a division-board, or dummy, which may be moved up when the useless combs are removed, so as to reduce the size of the hive, if needed, to a proportionate size to the strength of the colony. The dry combs are removed to the honey-house and put away for future use, and the empty space on the side is filled with warmth-retaining and moisture-absorbing materials. If we cannot increase the strength of our colony, it is at least a good plan to reduce the size of the hive to fit it, in such a way as this. But the strong colonies, covering every comb, are much to be preferred.

Now comes the question of food. If a sufficient number of bees is absolutely necessary to a safe wintering, it is equally evident that enough food must be had, and in an available position, in reach of the bees. Twenty-five pounds of honey is considered sufficient, in an ordinary winter, for the needs of a colony. With large hives we would place this amount as a minimum, and would say 25 to 40 pounds. A much smaller amount may suffice, and we have reliable reports from experts showing that a colony, wintered in the cellar, may be brought through with as little as five or six pounds; but I would counsel no one to try

First, the trials that have been made [illegible] resulted in so light a consumption were only for the time which the bees past in the cellar. The hives and bees were weighed at the moment of cellaring, and again weighed when removed, but they had more honey than the quantity mentioned as consumed, and if it had been otherwise, some of the bees might have been out of the reach of the scant supply, and their loss would have entailed the loss of the colony. Besides, these colonies have already past through a couple of months of fall weather, when put away, which necessitated some food, and this amount should be computed as well as the amount which they would consume when taken out of the cellar, between that and the time of the honey-flow, and this amount would be very much greater than either the fall consumption or even the cellar consumption, for in the spring they need food, not only for the adult bees that consume but little, but mainly for the young brood which requires a very great amount of food to reach the adult state, and this brood-rearing must not be restrained under penalty of having but a weak colony at the opening of the harvest and a consequent light flow of nectar.

So, even if we winter bees in the cellar, it is well to have plenty of stores. But I cannot help saying that it is most advisable, if either the number of bees, or the quantity of honey, is scant, or if both are short, to winter in the cellar, if a good cellar is at hand. But more of this by and by.

The third question I have in view, and which I consider as third in importance, is the quality of the honey. Perhaps this has more weight than many would imagine. The experienced apiarist who has seen his bees die by the hundreds of colonies by the foul and filthy disease—diarrhea—is very eager on this point, and dreads above all things the harvesting of fruit-juices, or unripe honey, in late falls. Fruit-juices, grape-juice and apple-juice, principally, are the worst supplies that the bees may gather, and the horticulturist, whose grapes have been suckt dry by the bees of his neighbor, is very much mistaken when he thinks that the apiarist is getting rich at his expense. It is just the other way, and the damaged grapes, or the cider-mill, have caused more loss of bees than almost any other single mishap that bees may encounter.

So the horticulturist and the apiarist should go hand in hand, for their interests are identical, and the loss of one is balanced by the loss of the other, both in the fall and in the spring, for it is well known that when the weather is ugly and the bees cannot visit the apple-bloom in May, the prospect of an apple crop is very poor. We are glad to see that, as people become more enlightened, they become aware of these facts, and the strife that used to exist between these two branches of farming is fast becoming a thing of the past. No one can appreciate this better than ourselves, for we are grape-growers here, now, on a large scale, and it is because we found it necessary to convince our neighbors that they were mistaken in imagining the existence of antagonism between fruit-growing and bee-culture, through the imaginary depredations of the bees.

But I have deviated from my subject in such a way that I am now compelled to leave further consideration of the question of honey for wintering for a later article.

Hancock Co., Ill.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Wax-Rendering Arrangement—Wax-Press.

1. For a large apiary of say 200 colonies, what method of rendering cappings into wax would you recommend?

2. I have used both the Doolittle and Boardman solar extractors. The former is too small and the latter not altogether satisfactory. With the Boardman, after a day's exposure to the sun, the honey in the cappings gets almost black. The contents of the extractor cannot be removed, on account of the multitude of bees that would get killed, until bees have ceast flying. It is not convenient for me to take the Boardman into the honey-house. The wax and black refuse are so mixt that it is always necessary to remelt the wax so obtained. Can you recommend a solar extractor that is so constructed that it will in one operation effectually separate wax, honey and refuse?

3. What is a wax-press, and how made and workt?

JAMAICA.

ANSWERS.—1. Probably nothing would suit you better than a large solar extractor.

2. I don't know of any particular extractor that would exactly meet your wants, but you would do well to try the sort of receptacle used by Rauchfuss Brothers. Instead of there being one single place for the honey and wax to go, the receptacle is divided into apartments so as to make a series of receptacles. Everything goes into the first receptacle until it

is filled, then it overflows into the second receptacle, that into the third, and so on. That gives a chance for impurities to settle, much as they do when a large body of wax is allowed to cool very slowly, this latter being the plan used to cleanse wax very largely. It appears that you have more heat from the sun than is desirable. Can you not reduce the heat, and thus save the honey from being darkened? A coating of some kind of whitewash on the glass might help (what do saloon-keepers use on their windows?), or some cloth laid over. If that does not work satisfactorily, you might allow the sun its full force and reduce the heat in the receptacle by giving air to it by means of one or more screened openings directly near the receptacle.

3. Perhaps the wax-press is one used across the water, the exact construction of which I cannot give, but the principle is to have a press inside another vessel, the latter or larger vessel containing water and steam, thus keeping the press and its contents constantly warm.

Packing Bees for Winter.

I keep my bees in the "Champion" chaff hive. Do you think they will be too warm if I put them in a dry-goods box and fill up the space with straw? MICHIGAN.

ANSWER.—No danger of their being too warm. The danger of too much packing is hardly that it makes bees too warm, but that they will be too cold when it comes a warm day. When a warm day comes, it takes longer for the heat to work through thick packing than through a thin wall.

What to Do with Partly-Filled Sections.

Those sections or one-pound boxes that are from ⅓ to ⅔ filled, and capt, and the remainder uncapt—what should be done with them to bring in the greatest returns?

SUBSCRIBER.

ANSWER.—In most cases the best thing is to sell them for table use at a reduced price. For home use, if you are careful, you can melt them. Melt them very, very slowly (if it takes several days to melt them all the better), then when all melted and cold, lift off the cake of wax, and the honey will be even better than when it was in the comb, for it will be a little thicker.

Preserving Fruit in Honey—Shiny Black Bees.

1. How can I preserve fruit in honey, and still retain the flavor of the honey?

2. What is the cause of the black on all strains of bees, shining as if polisht (only since cool weather has started)? My bees continue to gather pollen every day.

SOUTH ALABAMA.

ANSWERS.—1. I'm sorry to say I don't know very much about it. I have read of keeping fruit simply by putting it raw in honey, but have had no practical experience. You cannot heat honey enough to cook the fruit without spoiling the flavor of the honey, and I confess I'm just a little skeptical about raw fruit keeping in honey. Possibly there might be such a thing as cooking the fruit, putting it in cans, and then filling up with honey. If any of the friends have had any practical experience in preserving fruit in honey, successful or unsuccessful, by all means let us have it. We know as yet too few ways of using honey.

2. It is because the plumage of the bees has been removed. A bee that has followed a long course of robbing is likely to be thus black and shiny, and also bees affected with paralysis.

What to Do with Combs of Honey.

I just commenced to keep bees the past summer, and have about 30 pounds of honey in brood-combs, after leaving 25 pounds in each hive for winter. I have no extractor, and would like to know if there is any way to get the honey out of the combs without an extractor? If not, what is the best thing to do with the combs? PENNSYLVANIA.

ANSWER.—I don't know of any way to get out the honey and leave the combs sound and whole without an extractor. But don't you want to keep those combs with the 30 pounds of honey to give the bees next spring? Each colony that has 25 pounds for winter will probably be able to use to very great advantage another 5 or 10 pounds next spring. An enormous quantity of stores are consumed in rearing brood, and the likelihood is that every bit of that 25 pounds will be all used up before clover-bloom, and the bees will be going more or less on short rations. A frame or two of honey will encourage them to greater brood-rearing, and every ounce you give them in that way will be returned with interest in the surplus crop. By all means save those combs for the bees next spring.

Drone-Comb Foundation.

Is there such a thing manufactured as "drone foundation?" Mr. J. S. Hartzell speaks of it in his article on the "Golden Method," on page 658. INDIANA.

ANSWER.—Yes, I believe it has been made to a limited extent, and also a compromise sort about half way between drone and worker.

Feeding Bees in a Room.

I have a few colonies of bees which I transferred about one month ago, and have them in a small room. I gave them plenty of honey in the brood-chamber, and put a box in front made of screen-wire to keep them in; I do not let them out on account of other bees coming in to rob them. I feed them all the extracted honey they will eat, and keep them warm, and they work very nicely. The screen boxes in front are 6x6x12 inches. What will be the effect on the colony by spring? (They are putting honey in the sections now, some of them). Will it weaken or strengthen the colony? IOWA.

ANSWER.—I don't know, but should guess that a continuance of the treatment might result in death by spring. Feeding and confinement in a light place don't go very well together. Possibly they may pull through, but if they have enough to take them through the winter it might be better to stop feeding, and perhaps put them in the cellar. If they are in danger from robbers, instead of shutting them up entirely, allow a passage for just one bee at a time, and they can protect themselves, especially if the entrance is not directly into the cluster but through some kind of a front or side chamber.

A Dozen Questions.

1. I bought three Italian queens, introduced them to three colonies of black bees July 2, and the bees killed them all. I waited for them to rear their queens, and learned that laying workers had set up business. The sealed brood is not flat, it stands up round-like, like little marbles. I have no weak colonies to unite them with. What can I do with them?

2. Do you really think that it was laying workers?

3. Will laying workers cause colonies to dwindle down to nothing?

4. Are there ever a queen and a laying worker in the same hive?

5. Which are the best bees, Carniolans or Italians?

6. What clover do you think would be the best honey-producer in this climate?

7. What is the best way for introducing a queen?

8. How much comb honey should one colony of bees average per year?

9. What kind of a cellar should bees be wintered in?

10. What is the best way to winter bees?

11. How far from the house should bees be?

12. Does a bee die when it loses its sting?

SOUTH CAROLINA.

ANSWERS.—1. If there continues to be nothing but drone-brood up to this time, probably you can do nothing better than to brimstone them. That will save the honey they would eat before dying. They are all three or four months old, some of them older, and would be of little value even if you had weak colonies with which to unite them?

2. It is hard to say whether laying workers or drone-laying queens, as the appearance would be much the same in either case, and one would be about as bad as the other.

3. Sure.

4. Sometimes. But if a queen has begun to lay, you may pretty safely count on the laying workers closing up business, unless in rare cases where frames of brood are barred from the queen by a queen-excluder, and in that case there will be only a single egg or a few eggs in queen-cells.

5. Probably the great majority would say Italians?

6. I'd rather take the word of some one living in your part of South Carolina. If I could get no satisfactory information in that way, I should give a good trial to sweet clover and crimson clover.

7. If you follow out to the letter any of the ways given in

the printed directions sent out with queens by queen-breeders, you will be pretty safe. Your text-book on bee-keeping will give you information on the subject, and on many others that will many times over pay the cost of the book if you study it faithfully.

With almost any way of introducing queens there will be occasional failures, but I'll tell you a plan you may follow that will make a sure thing of it, if you are willing to be to the trouble. Take two or more frames of sealed brood, no unsealed brood, some of it just hatching out, be sure to brush off every last bee, put in an empty hive and add a comb or two containing some honey. Shut the hive up bee-tight, and open it in about five days, making the entrance only large enough for a single bee if there's the least danger of robbers. If the weather is not warm enough during the five days the hive is shut up, take the hive into some place where it will be warm enough.

8. I don't know. In some places the average will be much more than in others. In most places 50 pounds is probably a good average, and that's a good deal too much in some places. On the other hand, some places may go considerably beyond that.

9. The best cellar for you is probably out-doors. Farther North almost any cellar will answer that is well aired, that can be kept dark, and that has a temperature that will keep bees most nearly dormant, that temperature generally being somewhere near 45°.

10. Probably out-doors in South Carolina.

11. That's a matter of convenience, circumstances and taste. Under ordinary circumstances, perhaps eight rods is a good distance. In some cases eight feet would be enough, and in some cases 16 rods would be better.

12. If a considerable portion of its intestines come away with the sting it will die before long. If nothing but the sting and the poison-sac is lost, it will live perhaps some days, but I'm not entirely sure about that. It's doubtful that it will live in any case as long as if it had not lost its sting.

BEEDOM BOILED DOWN

Wax-Worms.—Gravenhorst advises to take the frames from the hive one after another, shake off the bees, knock on the wood of the frame with a knife-handle, and this will make the worms crawl out of their hiding-places, when they can be dispatcht.

Greenhill's Non-Swarming Hive is pictured in the British Bee Journal. A space below the brood-nest allows a super of shallow frames. When these are partly workt out, they are put above and replaced by another set of empty ones. It is practically the Simmins non-swarming plan.

Propolis in Different Localities.—Editor Root, of Gleanings, has been observing in his travels the difference in the kind and amount of propolis in different localities, and accounts thereby for the fact that "one bee-keeper thinks the Hoffman frame an intolerable nuisance, and another regards it as the *ne plus ultra* of perfection." He finds propolis much worse in Northern Illinois than in Ohio or New York.

A Novel Method of Wintering was reported across the water some time ago, a weak colony having placed over it a loaf of sugar covered with a common flower-pot, the whole carefully covered over. The attendant success induced another man, reported in a French bee-journal, to try the same thing on two weak colonies, and they came through in fine condition. The moisture from the bees was sufficient to enable them to supply themselves from the dry sugar.

Full Sheets vs. Starters in Sections.—It pays to use full sheets of foundation in sections in order to get the combs well attacht to the wood, and sealed all around, and also to get a larger yield generally, but for tenderness and fine edible qualities only a starter should be used, according to F. Greiner, in Gleanings. The editor replies that with starters more than half the combs will be finisht drone, and these will be more "gobby" eating than comb honey from full sheets of worker foundation.

Large vs. Small Hives.—Editor Hutchinson, of the Bee-Keepers' Review, thinks the articles written in Gleanings by C. P. Dadant are not entirely relevant, as the discussion as to size of hives has been almost wholly with reference to comb honey production, and the Dadants run for extracted, for which the size of hive matters little if it's big enough, while for comb honey the line must be sharply drawn between brood and surplus, and to get the right proportion of fine, white honey stored above this line requires skillful and peculiar management.

A Simple Swarm-Catcher.—Besides a spray-pump, Franz Henkel says his apparatus for securing swarms is a birch-broom tied to the end of a long pole, a piece of comb the size of the hand being fastened among the splints of the broom. When a swarm is about to settle, the broom is held close to it, and the invitation is generally promptly accepted by the bees. If the swarm has already settled, it will move upon the broom if the latter is held steadily against the swarm. If the lower end of the pole is sharpened, it may be thrust into the soft ground of the garden, and thus save holding so long. When the swarm is clustered on the broom, it is lightly sprayed, and it can then be carried to the desired place.—Leipziger Bztg.

Brown's Honey-Strainer.—A very ingenious method of separating from extracted honey bits of wax and other matters is given by F. E. Brown, in Gleanings, by means of what he calls a strainer. "This is made of wood or metal, a box 14x22 inches, and 10 inches deep. It has two partitions which serve as a separator. The first partition is within four inches of the end nearest to the extractor. It is made fast to the bottom, but it lacks two inches of coming to the top of the box. The honey falls down into this small compartment, and then it will rise up to the top and run over into the middle room of the strainer. The second partition is placed within four inches of the other end of the box, and it will lack one inch of coming down to the bottom. Thus the honey, in coming from the extractor, will plunge down with force into the first part, and it will then rise and bring all the wax with it to the top in order to get over into the second space. The wax and all foreign substances will remain to float on top in this large or middle space, while the honey will be compelled to run into the third or last space through under the second partition, and then up to the level of the honey in the middle space, where it will find an exit into the tank."

The Names and Addresses of all your bee-friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums we are offering. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.

White Comb Honey Wanted.—We are in the market for best white comb honey put up in 12 or 24 pound single-tier shipping-cases. We would like it to run about 11 and 22 pounds, respectively. If you have what you think will suit us, please write, saying how much you have, and at what price you will deliver it in Chicago. Address, George W. York & Co., 118 Michigan St., Chicago, Ill.

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

Honey as Food is a neat little 24-page pamphlet especially gotten up with a view to creating a demand fo honey among should-be consumers. The forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 30 cents; 50 for 50 cents; 100 for 90 cents; 250 for $2.00; 500 for $3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

AMERICAN
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Northwestern Convention it is thought best to postpone until low rates are in effect on the railroads, as such are esential for attendance. It has been found over and over that unless reduced rates can be secured very few feel that they can afford to attend a bee-convention. As soon as we learn that general excursion rates to Chicago obtain, we will try to arrange for the next meeting of the Northwestern Bee-Keepers' Association.

◆

That New Bee-Book Offer on page 732 ought to "make your mouth water," if you haven't already one of the standard books on bee-keeping. Remember, that liberal offer will be withdrawn Dec. 10, and no mistake about it. We couldn't afford to hold it open longer than that, as we expect that the edition may be exhausted before that time. Better write quick if you want Prof. Cook's 450-page, cloth-bound bee-book for only 50 cents! Turn to the offer now, and read it—on page 732.

◆

Attention, Colorado Bee-Keepers. — Pres. Aikin, of the Colorado State Bee-Keepers' Association, wants every Colorado bee-keeper to read this notice;

TO ALL COLORADO APIARISTS.

The Bee-Keepers' Association will meet in the Capitol Building, Denver, room 33, second floor, Nov. 30 and Dec. 1 and 2. Never in the history of the Association have we had so large a membership and so much work done as during this year. There is important work to be done at this meeting. Your Marketing Committee will have a report of the season's work. Last winter we revised our constitution and by-laws, and there are yet some more changes to be acted upon at this meeting. We will discuss Marketing, Grading, Foul Brood, Experiments, Solar Wax Extractors, Improved Appliances, Legislation for Bee-Keepers, etc. We expect help from the Agricultural College and Senator Swink. Let every Colorado bee-keeper who reads this come if possible, and if you cannot come, write of what most interests you, and tell us what you want done. Write either to myself or to Secretary F. Rauchfuss, Elyria, Colo.

R. C. AIKIN, *Pres.*
Loveland, Colo.

We believe that the officers of the Colorado State Bee-Keepers' Association have workt harder the past year for their organization than any set of apiarian officers we know. If the membership, or bee-keepers, in that State would take as much interest in their society and its objects, as do the officers, it could easily lead this whole country in apicultural affairs. Let every Colorado bee-keeper attend that meeting.

◆

The Union and Comb Honey Lies.—Lately we received a clipping from one of our readers—a Mr. Irving—taken from the New York Evening Post, who enquired if we couldn't do something about it, as it was one of the common lies that certain newspapers seem to delight in keeping alive to the injury of all honest producers of comb honey.

We conceived the idea of forwarding Mr. Irving's letter and the clipping to General Manager Secor of the United States Bee-Keepers' Union, with the suggestion that he write the editor of the Post, calling attention to the untruthfulness of the statements, and pointing out the injurious results that would follow the publication of such misleading statements in an influential newspaper.

Well, Mr. Secor acted promptly upon our suggestions, and here is his able letter of correction:

FOREST CITY, IOWA, Oct. 29, 1898.
To the Editor of the New York Evening Post.—

DEAR SIR:—A friend from New York has sent a clipping which he says he cut from your paper of Oct. 22. It is as follows:

"It is a blow to learn that the honey of commerce is not above reproach. Its adulteration is, it seems, quite common. Glucose is one of the ingredients used for the purpose. Even honey in the comb is not to be accepted with absolute confidence, as the cells can be imitated in paraffine. An occasional diet of honey is an excellent thing for children. Its qualities are searching, and it is cleansing and stimulating to the system. It is a curious thing, that children will crave it and eat it ravenously for a short time; then turn from it entirely. When the period of rejection sets in, it is an evidence that the system has had enough."

I am sure you do not wish to injure any honest industry, and that you endeavor to publish the truth on all subjects. Your past record for fairness, and the high position the Post holds among journals, convinces me that it aims to be just and reliable.

But that fact only increases the danger if an error by any chance creeps into its columns.

I wish to comment on that sentence relating to comb honey, which says: "Even honey in the comb is not to be accepted with absolute confidence, as the cells can be imitated in paraffine."

There is a sort of "thus saith the Lord" positiveness about that statement which will prejudice lovers of honey who have never investigated the subject, and it is that sentence which I especially wish to explain, and, if possible, elucidate. While the writer does not say positively that artificial honey is placed in the cells "*imitated in paraffine*," a reasonable construction would warrant that inference, and I have no doubt the general reader would so understand it.

This is not the first publication of such a misleading statement. Others have asserted that comb, in imitation of that made by bees, is made by machinery, filled with glucose syrup and sealed over by a hot iron. But such statements are usually founded on ignorance of the subject, or wrong motive, or a desire to startle the public mind by marvelous revelations. It is of the same credibility as that other wonderful statement, that eggs are actually manufactured, shell and all, so perfectly that no one can tell the difference except by trying to hatch them!

When we realize the delicate texture and fragile nature of honey-comb as made by bees, it will be easy to understand that it is a mechanical impossibility to make an article in imitation of it that cannot be readily detected.

The limit of mechanical ingenuity up to the present time seems to have been reacht when the septum, or *base* of cells, is made of wax, on which the bees will construct cells and complete the comb. This is called "foundation" by the trade, and is made so thin that it can scarcely be detected from the natural septum made by the bees. Paraffine, however, is never used for this purpose, because this wax melts at a lower temperature than beeswax, and cannot be utilized for that purpose. The heat of the colony will melt it, and therefore ruin not only the "foundation" but the product as well.

Paraffine wax, therefore, is of no value to bee-keepers for this purpose.

If your correspondent knows of any factory where comb honey is produced without the aid of bees I should be glad to be informed as to the exact place. There has been publisht, in an influential and responsible journal, for years, an offer of $1,000 for one pound of comb honey made by machinery that cannot readily be detected from the genuine article. No one has attempted to claim that prize. It is safe to say the thing cannot be done.

But, some one says, glucose syrup may be fed to bees and by them stored in the comb. That is also impractical, because bees will not touch glucose syrup unless starving, and then, of course, they are not in proper condition to store honey.

So please tell your readers that when they buy honey in the comb they may reasonably expect to get something gathered from flowers by bees. Also tell them that such honey has nutritive and medicinal qualities not found in cane-sugar or glucose.

If children were brought up on honey instead of cane-sugar and candy, the intestinal and kidney diseases common to our civilization would be greatly lessened, if not entirely avoided. Yours truly, EUGENE SECOR.

We await with much interest the next action of the Post. Will they do the only honorable thing, and publish Mr. Secor's plain and truthful letter, or will they ignore it, and continue to slander bee-keepers and misinform their readers concerning the best sweet known—pure honey?

Why wouldn't it be a good thing for bee-keepers everywhere to try to have publisht in their local papers, Mr. Secor's most excellent letter to the Post? It would do untold good, we believe.

◆

The Next Ontario Convetion will be held at Guelph, Dec. 6, 7 and 8, 1898. As reduced railroad rates will be in force at that time, there should be a large attendance, and a good meeting. On the program we find these subjects and those who are to write and speak on them, after which general discussion will follow:

The President's Address, by M. B. Holmes; J. B. Hall to open discussion on the address.

"Spring Management," by H. G. Sibbald; D. W. Heise to open discussion.

"Summer Management," by W. J. Brown; Jas. Armstrong to open the discussion.

"Some Experiments on Wintering Bees," by Jas. Fixture, of the Experimental Farm at Ottawa; W. J. Brown to open the discussion.

"Rational Methods of Extracting Wax," by F. A. Gemmill; W. A. Chrysler to open the discussion.

"Management in the Swarming Season," by W. Z. Hutchinson; A. E. Hoshal to open the discussion.

"Honey for Market," by R. F. Holtermann; Mr. Gemmill to open the discussion.

"Making Our Association More Useful," by J. K. Darling; Jas. E. Frith to open the discussion.

"The Rascally Supply Man," by J. D. Evans; John Newton to open the discussion.

"Thoughts by a Novice," by Dr. A. B. Mason; C. W. Post to open the discussion.

"Management of Comb Honey," by R. H. Smith; J. Sparling to open the discussion.

For any further information, address, the Secretary, Wm. Couse, Streetsville, Ont.

◆

The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

THE WEEKLY BUDGET

JOSEPH E. MORGAN, of Fremont Co., Idaho, writing us Oct. 27, said:

"I have been taking the American Bee Journal for 18 months, and have been very well pleased with it. I have found that it has not lost any of its merits."

MR. G. W. FASSETT, of Addison Co., Vt., wrote us Nov. 7:

"I often find a single item in the American Bee Journal that is worth all it costs for a year; and I think there were new ideas enough in Mr. Moore's series of articles on marketing honey to pay any one the price of a year's subscription."

MR. FRED S. THORINGTON, of Missouri, offers this good advice in the Progressive Bee-Keeper, on selling the honey crop:

"There should be as much care used in disposing of a crop of honey as there is used in producing it; and we should not give it away after it is produced, for the want of a little energy being used in its sale on the part of the bee-keeper."

MR. A. O. SUTTON, of Shiawassee Co., Mich., wrote us Oct. 26, as follows:

"We had the misfortune to lose our store and stock of groceries and hardware by fire, Saturday morning, Oct. 22. It is a total loss to me. I am getting my cellar ready to-day to put my bees in."

While it seemingly may never pay to "lock the barn after the horse is stolen," still it's a good habit to get into—to "lock the barn." It pays to keep things insured.

THE SOUTHLAND QUEEN, of Texas, had these editorial paragraphs in the October issue:

"We need a good rain in this 'neck of the woods,' and we must have it this fall or early winter, or our cakes will be dough for 1899, sure.

"We are still having it hot and dry, and we have been robbing the other way lately. We have just fed one of our out-apiaries of 100 colonies 1,000 pounds of sugar syrup and honey mixt; this is robbing from the pocket to help the bees, instead of robbing from the bees to help the pocket."

JOHN H. MARTIN (Gleanings' Rambler), writing us Oct. 26, reported thus:

"I have finisht up a fair honey season, and for a sort of holiday outing I have just started for a tour through Oregon and Washington. I don't know but the Alaska fever will strike me when I reach Seattle!

"P. S.—Please don't allow that ——— man to get off any more of his jokes about my discovering gold-mines."

Why, Rambler, we don't see what wrong there is in "discovering gold-mines." We hope you will "strike it rich" somewhere, and then—well, send us some of it, if you feel like it.

MR. W. BROUGHTON CARR, co-editor of the British Bee Journal, wrote us as follows, Oct. 29:

GEORGE W. YORK, ESQ., Chicago, Ill.—

Dear Sir:—You will, on perusing the British Bee Journal of Oct. 27, gather all that can be said of the sad bereavement which has befallen our Mr. Cowan and his family in the wreck of the "Mohegan," so I need say no more here on the sorrowful topic.

I was, however, requested by Mr. Cowan, just before he left England for California, to say that you would no doubt understand why he was under the circumstances unable to call on you on his way South, but would go direct through from New York to California.

If you are able to convey this intelligence to some of Mr. Cowan's friends, who might wonder why he did not call on them according to promise, you will much oblige.

Yours faithfully, W. BOUGHTON CARR.

To Our Regular Subscribers—Now for New Readers!

6 Great 50-cent Offers—Each One Free!!

On this page you will find six splendid premium offers, and we will mail your choice of any one of them for sending us $1.00 for **just one New subscriber** for 1899—and we will throw in the last three months of this year's Bee Journal free besides to each new subscriber you send on these offers. That makes 15 months of the Bee Journal to the new subscriber. Or, for sending us **4 New subscribers,** as above, we will mail the sender all of the 6 great 50-cent offers.

JUST READ WHAT THEY ARE:

Offer No. 1.—Samantha at Saratoga.

100,000 Sold at $2.50 per copy.

This is indeed a feast of fun, by the only peer of Mark Twain's humor—JOSIAH ALLEN'S WIFE (Marietta Holley.)

Read this Extract from the Book:

And right here, let me insert this one word of wisdom for the special comfort of my sect, and yet it is one that may well be laid to heart by the more opposite one. If your pardner gets restless and oneasy and middlin' cross, as pardners will be anon or even oftener—start them off on a tower. A tower will in 9 cases out of 10 lift 'em out of their oneasiness, their restlessness and their crossness.

Why I have known a short tower to Slab City or Loontown act like a charm on my pardner, when crossness wuz in his mean and snappishness wuz present with him. I have known him to set off with the mean of a lion and come back with the liniment of a lamb.

And jest the prospect of a tower ahead is a great help to a woman in rulin' and keepin' a pardner straight. Somehow jest the thought of a tower sort of lifts him up in mind, and happifys him, and makes him easier to quell, and pardners must be quelled at times, else there would be no livin' with 'em.

She takes off FOLLIES, FLIRTATIONS, LOW-NECKED DRESSING, DUDES, PUG DOGS, TOBOGGANING, ETC.

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"Exceedingly amusing."—Rose E. Cleveland. "Delicious Humor."—Will Carleton. "So excruciatingly funny, we had to sit back and laugh until the tears came."—Witness. "Unquestionably her best."—Detroit Free Press. "Bitterest satire, coated with the sweetest of exhilarating fun."—Bishop Newman.

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Four pieces New Sheet Music, which sell at music stores at 50 cents each—$2.00; Three years' membership in the World's Musical Association (regular price $1.00 a year), $3.00. Total, $5.00. We offer the whole thing at 50 cents.

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The World's Musical Association is an organization having special advantageous relations with the leading music publishers of this country and Europe, and being an enormous purchaser, it is enabled to supply to its members (and will do so) any music desired (at any time within the term of their membership), at such wholesale prices as are usually granted only to very large dealers.

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Illustrator No. 4.—Judging Fowls, Description of Breeds, Mating, etc., 25 cents.

Those offers ought to bring us in at least 2,000 new readers during this month and next. You could send in your own renewal for 1899 at the same time you send in a new subscriber, if you wish. If you do, you can select any one of the above offers free for yourself, provided you send at least **two New subscribers** at the same time. That would give you your choice of **three** of the offers—by sending your own renewal for 1899, and two new subscribers ($3.00 in all).

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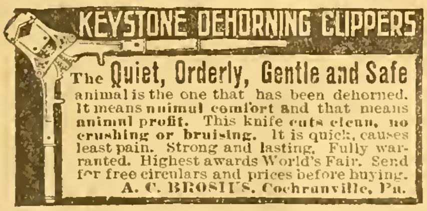

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Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

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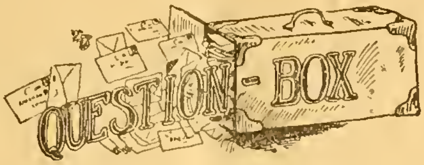

In the multitude of counsellors there is safety.—Prov. 11-14.

Extracting-Frame Preferred.

Query 85.—Please give the dimensions of super frame for extracting, to which you accord the preference, giving measurements of each of its parts.—S. A. D.

E. France (Wis.)—The Langstroth frame.

Emerson T. Abbott (Mo.)—The Langstroth frame.

R. L. Taylor (Mich.)—The frame used in the Heddon hive.

G. M. Doolittle (N. Y.)—The *same* frame as used in the hive below.

Prof. A. J. Cook (Calif.)—Size of brood-frames, Langstroth or Heddon.

D. W. Heise (Ont., Can.)—The Standard Langstroth, if for extracting only.

Eugene Secor (Iowa)—Half the depth of the Langstroth frame, or a little more.

C. H. Dibbern (Ill.)—As I extract very little honey I will leave this for others to answer.

Dr. C. C. Miller (Ill.)—The same as frame of brood-chamber, except perhaps shallower.

W. G. Larrabee (Vt.)—I use the Langstroth frame for extracting, the same as for the brood-nest.

Dr. J. P. H. Brown (Ga.)—I prefer a frame the size of the Langstroth. For supers, a half-frame.

Mrs. L. Harrison (Ill.)—The regular Langstroth frame. I have had no experience with any other.

J. M. Hambaugh (Calif.)—I use the regular Langstroth 10-frame hive supers and hive, interchangeably.

P. H. Elwood (N. Y.)—I have no very decided preference, but think a half-story frame preferable—6 to 8 inches deep.

Jas. A. Stone (Ill.)—I have never used any but the Langstroth frame in an upper story, with queen-excluder between.

Rev. M. Mahin (Ind.)—My brood-frames are 12x10 inches, outside measure. My frames for extracting are 12x6 inches, and they exactly suit me.

R. C. Aikin (Colo.)—I must say I do not know, but probably a 5x16 frame, top and bottom 3/8x1 inch, ends 3/8x1 3/8x5—a standing, closed-end, close-fitting frame.

J. E. Pond (Mass.)—I use the regular Simplicity-Langstroth frame. Others may be better in some localities, but for all around work I don't think it can be excelled.

A. F. Brown (Fla.)—A hanging frame, 17 5/8x9 1/8; top-bar one inch wide and 3/4 thick; bottom-bar 3/4 inch wide and 1/4 inch thick; end pieces 1/4 inch thick and one inch wide.

Dr. A. B. Mason (Ohio)—In the early part of the season, before the colony becomes strong enough to occupy a full story as a super, I use frames the same

Sweet Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Sweet Clover	.60	$1.00	$2.25	$4.00
Alsike Clover	.70	1.25	3.00	5.75
White Clover	.80	1.40	3.00	5.00
Alfalfa Clover	.60	1.00	2.25	4.00
Crimson Clover	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, wanted by freight.

Your orders are solicited.

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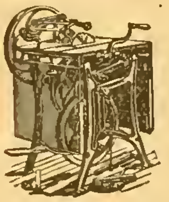

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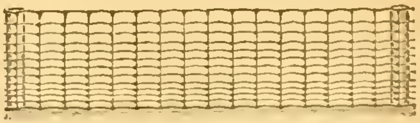

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all winter from the lane, but buy Page Fence and have a clear track. No drifts behind our Winter Styles. Ask for prices.

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COOK'S "BEE-KEEPERS' GUIDE"
FOR ONLY FIFTY CENTS.

You ought to have a good bee-book, if you haven't one already. Prof. A. J. Cook's Manual, or "Bee-Keepers' Guide," is one of the very best publisht to-day. It is bound substantially and neatly in cloth, contains over 450 pages, and retails at $1.25 a copy, postpaid. But we are going to make you an offer, **for the next three weeks** (positively ending Dec. 10), **that will open your eyes.** Here it is:

To every subscriber who before Dec. 10 will pay his subscription to the American Bee Journal to the end of next year (1899) we will mail a copy of Prof. Cook's "Bee-Keepers' Guide" for only 50 cents extra. That is really getting a dollar-and-a-quarter bee-book for only 50 cents. Can you afford to miss such a chance as that? Address,

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Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

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They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

Please mention the American Bee Journal. 7Atf

☞ See Honey Offer on page 733.

length as the Langstroth, and 4¼ inches between top and bottom bar. When populous enough, I use the full size Langstroth frame.

O. O. Poppleton (Fla.)—I use and prefer my regular brood-frames. Dimensions are: Top-bar, 14 inches; end-bars, 12; bottom-bar, 13⅛; these latter projecting ¼ inch outside of the end-bars.

S. T. Pettit (Ont., Can.)—The super frames to be put on in early spring should be about 5 inches deep. The super comb I use for extracting contains about 180 square inches. It would take an article to explain why I use so large a frame.

Chas. Dadant & Son (Ill.)—For the Langstroth hive we would use regular frame top and bottom bars and a 6-inch end-bar. In our hives we use a frame 1⅛ inches longer than the above, and of the same depth.

E. S. Lovesy (Utah)—I prefer the 10-frame standard short Langstroth hive, about 16x16 inches square frame, 9⅛ deep over all. It is easy to manipulate, and if run three stories with a good honey-flow it is always a success with strong colonies.

J. A. Green (Ill.)—The frame which I use for extracting is 17⅝x5⅝, 7 in a space 11 inches wide—about 1⅝ inches from center to center. Eight brood-frames go in the same space. The end-bars are close fitting, held together by a wooden screw in the side of the hive; 7 of them prest together measure just 11 inches. Tops are ⅜x1¼; bottoms, ¼x1¼.

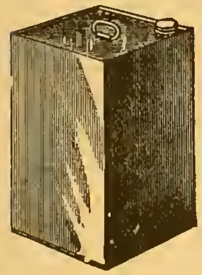
G. W. Demaree (Ky.)—For general use I prefer and use the standard Langstroth frame, 17⅜ inches in length, and 9⅛ in depth. As "helpers" in the honey storing season, I use shallow supers, frames 17⅜ inches in length, and 5 inches in depth. These shallow supers are sometimes given to weak colonies at the beginning of the honey season; but generally they are employed to give the bees storing-room for the freshly-gathered nectar, while the honey in the regular supers is being ripened and sealed by the hive workers.

GENERAL ITEMS

Report—Facing Honey—Queens.

In 1897 I had no swarms and every queen in the spring of 1898 was two years old or more. I started with 27 colonies, wintered on the summer stands, which consists of a bee-shed 80 feet long, 8 feet high, and 8 feet wide, covered with iron roofing, in one end of which I have an extracting and honey-room, 12 feet long. I had 23 prime natural swarms, and three of the parent colonies petered out. My honey crop consists of 658 finisht sections, and 1,313 pounds of extracted honey, making an average of 73 pounds to the colony, spring count, and 30 pounds of wax. With the experience gained the past season, I believe I can double this, next year, under similar conditions, but there are hardly ever two seasons alike.

I notice a great amount of controversy over the propriety of facing cases of comb honey. I nearly always find all colonies of bees that I work for comb honey and use division-boards will make every section of the same grade or quality of honey, either



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Best White Alfalfa Extracted...

ALL IN 60-POUND TIN CANS.

This is the famous white extracted honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can hardly get enough of the Alfalfa extracted.

Prices are as Follows:

A sample by mail, 8 cents in stamps, to pay for package and postage. By freight—One 60-pound can, 8 cents per pound; 2 cans, 7¾ cents per pound; 4 or more cans, 7½ cents per pound. Cash must accompany each order.

This honey is **ABSOLUTELY PURE BEES' HONEY**, the finest of the kind produced in this country.

☞ We would suggest that those bee-keepers who did not produce any honey for their home demand the past season, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. The Circular, "HONEY AS FOOD," will be a great help in creating customers for honey. Address,

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

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EVERY BEE-KEEPER

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Our 1898 Catalog

☞ Send us your name and address and we will take pleasure in mailing you a copy.

G. B. LEWIS CO., WATERTOWN, WIS.

Special Agent for the Southwest—

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Mr. Abbott sells our Hives and Sections at factory prices.

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INCUBATORS & BROODERS ....All about them. How to make and how to use successfully. Fully illustrated in Poultry Keeper Illustrator No. 2, 25 cts. Send for free sample copy of POULTRY KEEPER with particulars about other valuable poultry knowledge. Address, Poultry Keeper Co., box 10, Parkesburg, Pa.

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WONDERFUL DOGS It is simply marvelous how the Scotch Collie dog will learn to do your work for you, as well as protect your children and your home. Everybody pleased with ours and the prices. They are secured as fast as we can produce them. Write at once for particulars to POTTS BROS., box 10, Parkesburg, Pa.

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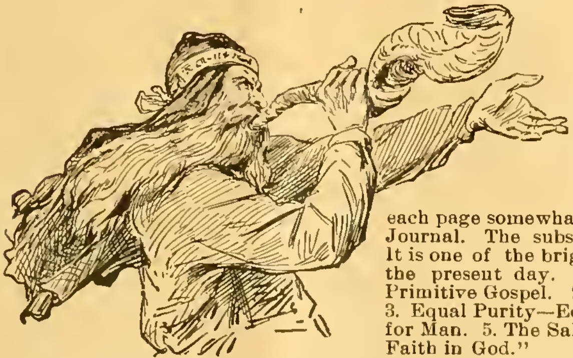

The Ram's Horn... Is an Independent Weekly Paper of 20 pages—each page somewhat larger than those of the Bee Journal. The subscription price is $1.50 a year. It is one of the brightest and best publications of the present day. Its "Platform" is: 1. The Primitive Gospel. 2. The Union of Christendom. 3. Equal Purity—Equal Suffrage. 4. The Sabbath for Man. 5. The Saloon Must Go. Motto: "Have Faith in God."

We will mail you a sample copy of the Ram's Horn upon receipt of a two-cent stamp.

OUR LIBERAL OFFER:

We wish to make our PRESENT subscribers to the Bee Journal a generous offer in connection with the Ram's Horn, viz: Send us **TWO NEW** subscribers for the American Bee Journal for one year (with $2.00), and we will see that the Ram's Horn is mailed you free for one year as a premium.

Or, send us $2.00 and we will mail to you the Ram's Horn and the American Bee Journal, both for one year.

GEORGE W. YORK & CO.,

118 Michigan Street, CHICAGO, ILL

white or amber, and the only honest way I can find is to put the 24 sections, when completed, in one case, and place some of the smoothest sides next the glass. It is decidedly dishonest to put two colors of honey in the same case—if commission men do expect it, the consumer does not. Were I to go to a grocery to purchase a few pounds of comb honey, and he handed me some that did not compare with the sample next the glass, in color, I should demand, if I purchast at all, the ones in front, or I should walk out. What think you of this?

I had this fall, after there were no drones, two colonies queenless, so I sent to a queen-breeder for two golden queens advertised in the Bee Journal as being purely mated, and neither of them ever laid an egg; and during the time (about eight weeks) the colonies had dwindled beyond reclamation, and both queens have died. Honesty is the best policy, especially with the brotherhood of bee-keepers when unions are advocated. Queen-breeders especially should send out what they represent. I might have saved the most of the young bees in the colony by uniting with others.

There are about 800 colonies of bees in this county, kept in a ship-shod way, and I believe I have harvested ⅓ of the honey.

T. R. G. WELCH.

Morgan Co., Utah, Oct. 24.

More Honey than in Previous Years.

I see a great deal said of the light honey crop from all over the country. I have on my farm only a few colonies, but I got more honey than in any previous year from the same number of colonies. I took notice of the three best colonies, and got 120 pounds of comb honey.

I started out a few years ago with Italian bees, but most of the bees in this part of the country are black, and now mine are all hybrids, and are bad tempered.

Here in the hills of Eastern Kentucky bees are generally wintered out-doors, but every severe winter there is more or less loss.

MILTON McDOWELL.

Johnson Co., Ky., Nov. 4.

Bees Didn't Do Well.

Bees did not do very well in this part of the county this year, storing only some late honey, which was yellow, gathered mostly from dogfennel and boarhound. We took off 250 pounds of surplus honey from eight hives.

HERBERT PRUNER.

Douglas Co., Oreg., Nov. 3.

A Report from Connecticut.

Myself and brothers have bees in the same apiary. We had 19 colonies last spring, all in good condition, all having wintered on the summer stands, part of them in a bee-shed open to the South, the rest exposed to the wind and storms of old Connecticut, her damp and foggy days in mid-winter, with the mercury up to 60 or 65 degrees, and in 36 hours or less down to zero or five or six degrees below.

Part of the bees are in the Langstroth hives, and some in the Simplicity-Cary. We had but five swarms the past season. Bees did not gather honey enough to live on all through the season up to Sept. 1, and had to fall back on what was left in the hive from winter stores, altho white clover was never so plenty, but the dry weather kept it from yielding nectar. I had two or three of the deep hives that had 40 pounds of honey on May 1. They gave me about 45 one-pound sections to the hive, but some of the Langstroth hives, that had fully 15 to 20 pounds May 1, did not even swarm or give us one box of comb honey—they barely lived. Lots of others in this section are crying the same story, within a radius of 10 miles in diameter, for I am so interested in the bee-business that I talk bees and handle bees for miles around.

Aug. 20 or 21, I examined some of my bees that I thought were good and strong, and behold, not one cell of honey could I see or find. Others did not have more than

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The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only ONE book can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted, see postpaid prices given with the description of the books on this page. Following is the clubbing-list:

1.	Langstroth on the Honey-Bee	$2.00
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3.	Bee-Keeper's Guide	1.75
4.	Bees and Honey [Cloth bound]	1.65
5.	Doolittle's Scientific Queen-Rearing	1.75
6.	Dr. Howard's Foul Brood Book	1.10
7.	Advanced Bee-Culture	1.30
9.	Bienen-Kultur [German]	1.20
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38.	Apiary Register (for 100 colonies)	2.00

one pound, all told; others a little patch here or there, as large as a 50-cent silver piece. I opened them again Aug. 27, and all were in the same condition as the time before—lots of brood and bees, but no honey. The weakest ones I fed a little syrup. Some of the hives have 8 frames, some 9 Langstroth frames, closed ends; the Cary hives 10 and 11 frames. Golden-rod began to bloom and yield honey well on Sept. 17. I opened the hives again, and found all completely filled and capt over; brood all hatcht, except a little in the center of the hive, and queen completely crowded out. I took five frames away from the nine, and three and four away from the eight-frame hives, extracted it, and gave them back some empty combs, and now they have from 20 to 40 pounds to winter on, all others the same in this section. So far as I have heard from, old box-hives that were as light as a feather are like lead now.

Now as regards casing honey: Have each and every case alike from face to back, be it 10 pounds, 100 pounds, or 10,000 pounds. When sent off to be sold, whether it be on commission or straight sale, do not represent one thing in front, another at the back and out of sight. All dealers are not fools if the bee-keepers do think so, or at least some of them. FRANK L. GILBERT.

Litchfield Co., Conn., Oct. 26.

An Old Reader Drops Out.

I am going away for treatment, and have just sold my little apiary of 24 colonies of good grade Italian bees. I very much regret giving up them and the American Bee Journal, as I have been a constant reader almost ever since Mr. Wagner was its editor. Perhaps, if I can regain my health, and can find somewhere in the South a suitable place for an apiary, I might resume the business. JOHN S. SLEETH.

Livingston Co., Ill., Nov. 6.

Rather Short Honey Harvest.

I am a beginner in bee-culture, the present being my first season at the business. The harvest was rather short in this locality, owing to the dry weather. We averaged about 50 pounds to the colony.

I think that any one interested in bees cannot afford to be without the American Bee Journal. There *may* be others as good (I have not seen them), but I do not think there is any better. A. E. MARLOW.

Jefferson Co., N. Y., Oct. 25.

Whole Graveyard of Blasted Hopes.

Nearly three years ago I sold out at Canon City, Colo., and went to California. I purchast a ranch of 164 acres of land about 10 miles east of San Diego, at the foot of the San Miguel mountains. My principal aim was to engage in the bee-business, keeping poultry in connection with that business. I considered my location a good one. North, east and south the mountains stood with a hundred thousand acres of alfilarilla, sage, and a hundred other honey-plants, near by the Sweet-Water reservoir, three miles long and ¾ wide; this not only furnishes abundance of water at all times, but also, on its margin, produces abundance of flowering plants during the dry season of the year. To the west are numerous eucalyptus trees and extensive orange and lemon orchards, with considerable deciduous fruit trees. I had bought, begged and captured bees till I had 100 colonies that were in good condition at the beginning of last winter. I also had a good start of poultry that was already yielding a profit; all together my prospects were encouraging.

But in January an old enemy—the asthma—seized me after a suspension of some years. Now began a fight that lasted for months. I would only get able to be up and walk about the house a little when a new attack would drive me to my chair, where I sat day and night for weeks gasping for breath. As the winter and spring past I saw there would be no honey crop in that region; and if it was the best season California ever saw I should not be able to give any attention to my bees. In April, when all hope of rain enough to give us a honey crop had disappeared, a man came along wanting to buy my bees. I told him he was the man I wanted to see badly, as I was sure we should not have enough honey gathered to keep the bees over till another year. But he was sanguine, and I sold out to him at $1.50 per colony. I then sold off all I had except my ranch and went to Pasadena, where I had a son-in-law. Here I spent two months without any improvement. I then went out to the mountains and spent a month; but still my trouble held on with a choking grip. I then pulled out for Fremont Co., Colo., leaving buried in the beautiful climate of California a whole graveyard of blasted hopes. And here I am, poorer and leaner—but not yet cured of the bee-fever. L. J. Templin.

Fremont Co., Colo., Nov. 5.

Report for Past Season.

Our report for the season of 1898 is as follows: Increast from 87 to 95 colonies, and harvested 2,150 pounds of amber extracted honey. Bees are in good condition for wintering. Inman Bros.

Midland Co., Mich., Nov. 9.

Not Bad for an Off Year.

I got 1,724 pounds of honey from 50 colonies the past season. Not so bad for an off year. I like the American Bee Journal very much. Henry K. Gresh.

Elk Co., Pa., Nov. 7.

Very Poor Season.

It has been a very poor season here for bees. I got less than 75 pounds of comb honey from eight colonies, spring count, and increast to 12. Early flowers seemed to have no honey, but the fall flow has been very good. The bees seem to have plenty for winter stores; so here is hopes for better success next year. F. D. Keyes.

Hampshire Co., Mass., Nov. 8.

Using Tests for Glucose.

I have used the tests for glucose on page 674, as mentioned at the Omaha convention, to good advantage in the short time I have known them. Grocers here are retailing so-called honey at 10 cents a pint. The dissemination of these simple tests will, in my opinion, do as much as anything in putting down adulteration. It is surprising the startling effect produced upon people by the tea test. It would be laughable if it were not so serious. I would advise bee-keepers to print these tests on their honey-labels. H. Austin.

Mercer Co., N. J., Nov. 1.

Southwestern Wisconsin Convention.

The Southwestern Wisconsin Bee-Keepers' Society met at Lone Rock, Oct. 5 and 6. There was not so large an attendance, as was expected, but there was an interesting meeting. There were several good papers read, including an excellent one on the Omaha convention of the United States Bee-Keepers' Union, by H. Lathrop.

The election of officers resulted as follows: President, N. E. France; Vice-President, M. M. Rice; Secretary and Treasurer, F. L. Murray, of Calamine.

The following resolutions were read and approved:

The Southwestern Wisconsin Bee-Keepers' Association at its annual meeting Oct. 5 and 6, at Lone Rock, feel grateful for the benefits derived from the State foul brood law, in the suppression of foul brood in the State of Wisconsin; and as there is still need of its continuance, this Society recommends N. E. France, of Platteville, for appointment by the Governor for State foul brood inspector.

These memorial resolutions relating to the death of Thomas Evans, was adopted:

Whereas, the intimate relations held by the deceast with the Southwestern Wisconsin Bee-Keepers' Society as its Vice-President, renders it proper that we place upon record our appreciation of his services; therefore be it

Resolved, That we deplore the loss of Thos. Evans, of Lansing, Iowa, with deep feelings of regret; that we tender his wife our earnest sympathy in her affliction, and the loss of a faithful partner.

Resolved, That a copy of the foregoing resolutions signed by the officers of the Society be given the wife of the deceast.

The convention closed with music by resident ladies and N. E. France.

F. L. Murray, Sec.

Lafayette Co., Wis.

Poor Year for Bees.

The past was a poor year here—hardly any swarms or honey, altho the bees are strong for winter. We had surplus honey from only one colony out of nine—I took 43 well-filled sections. J. M. Harding.

Knox Co., Maine, Oct. 25.

Exhibiting at Fairs.

During September and first week of October I exhibited bees, bee-appliances, and honey, at several fairs. Of course it is not neccessary to say that a glass hive and super showing the methods used to get comb honey was a great attraction, and brought me in touch with a large number of bee-keepers. Strange to say, there were quite a number who did not know there was such a paper as the American Bee Journal, and still a great many keeping bees in box hives. Of course, the premiums received for making an exhibit for the interests of apiculturists did not cover expenses and time, but I did it more to advertise my honey, which I am putting out myself from a door-to-door canvass.

John H. Denyer.

Northampton Co., Pa., Oct. 31.

Colorado.—The Colorado State Bee Keepers' Association will hold their annual convention Nov. 30 and Dec. 1 and 2, 1898, in the State Capitol Building, Denver. The Horticulturists meet Nov. 28, 29 and 30, our first day being their last. This arrangement will give members of both a chance to attend the other's meeting and discuss common interests. R. C. Aikin, Pres., Loveland, Col.

F. Rauchfuss, Sec., Elyria, Col.

Ontario.—The annual meeting of the Ontario Bee-Keepers' Association will be held in Guelph, Dec. 6, 7 and 8, 1898. Owing to the Guelph Fat Stock Show, the Guelph Poultry and Pet Stock Show, and the Experimental Union meeting on the same dates, there will be a large meeting of bee-keepers, and each association will be a help to the other, as many are interested in all the different meetings. All are cordially invited to attend the meetings. W. Couse, Sec.

Streetsville, Ont.

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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Nov. 8.—There is no change in this market since last quoted, honey of all kinds meets with good sale at prices then given. As this is the time of year when sales are most active, receipts are quickly disposed of. R. A. Burnett & Co.

San Francisco, Nov. 2.—White comb, 9½ to 10½c; amber, 7½ to 9c. Extracted, white, 7 to 7¼c.; light amber, 6¼ to 6½c. Beeswax, 24@27c

There is so little extracted now offering that it is hardly quotable in a wholesale way. Comb is in fair supply and is being very steadily held, altho with the demand for same almost wholly local, the movement is not very rapid.

St. Louis, Sept. 9.—Fancy white comb, 12 to 12½c.; A No. 1 white, 10 to 11c; No. 1 white, 9 to 10c.; dark and partially-filled from 5 to 8c. as to quality. Extracted in cases, No. 1 white, 6 to 6½c; No. 2, 5½c; amber, 5c; in barrels, No. 1 white, 5½c; amber, 4½ to 5c; dark, 4 to 4½c. Choice Beeswax, prime, 24c; choice, 24½c. At present there is a good demand for honey. Westcott Com. Co.

Kansas City, Sept. 9.—Fancy white comb, 12@13c; No. 1, 11@12c; amber, 10@11c. Extracted, white, 5½@6c; amber, 5@5½c; dark, 4½@5c. Beeswax, 22@25c.

The receipts of comb honey are larger.

C. C. Clemons & Co.

Boston, Sept. 30.—Our honey market shows a decided firmer tone since our last. A few sales have been made at 15c for an extra fancy lot, while almost all sales ranging from A No. 1 to fancy now are made at 14c, while occasionally, something a little off, will bring as low as 12½ to 13c. We do not look to see any lower prices.

Extracted, Florida, in barrels, mostly 6c to 7c, with a good demand. Beeswax, slow sale at 26c for best. Blake, Scott & Lee.

Indianapolis, Oct. 3.—Fancy white comb honey, 12 to 12½c; No 1, 10 to 11c. Demand fairly good. Tar-colored comb honey, 8 to 9c, with almost no demand. Clover and basswood extracted honey, 6½to7c. Beeswax, 25 to 27c.

Walter S. Pouder.

Milwaukee, Oct. 18.—Fancy 1 pounds, 12½ to 13c; A No. 1, 12 to 12½c; No. 1, 11 to 12c; No. 2, 10 to 10½; mixt, amber and dark, 8 to 9c. Extracted, white, in barrels, kegs and pails, 6½ to 7c; dark, 5 to 5½c. Beeswax, 26 to 27c.

This market is in good condition for the best grades of honey, either comb or extracted. The receipts of the new crop are very fair, and some of very nice quality. The demand has been and continues to be very good, and values are firm on fancy grades and straight, uniform packing. A. V. Bishop & Co.

Columbus, O., Oct. 29.—Fancy, 14 to 15c; No. 1, 12 to 13c; No. 2, 10 to 11c; amber, 9 to 10c. Receipts somewhat heavier, but demand improves as weather gets colder.

Columbus Com. and Storage Co.

New York, Oct. 22.—Receipts of comb honey are large, and there is quite a stock now on the market. While white is in good demand, buckwheat and mixt seem to be somewhat neglected, and quotation prices have to be shaded in order to sell in quantity lots: We quote:

Fancy white, 13 to 14c; No. 1 white, 11 to 12c; amber, 10c; mixt and buckwheat, 8 to 9c. Stocks of extracted are light of all kinds. Demand is good at following prices: White, 6 to 6½c; amber, 5½c; dark, 5c. Southern, in half barrels and barrels at from 55c to 60c a gallon. Beeswax dull at 26c.

Hildreth Bros. & Segelken.

Detroit, Oct. 20.—Honey in better demand and better prices as follows: Fancy white, 13@14c; No. 1, 12@13c; fancy dark and amber, 10@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c. M. H. Hunt.

Minneapolis, Oct. 20.—Fancy white clover comb is now selling at 11@12c.; amber, 10½c. Extracted fancy white clover, 5½c.; amber, 4¾@5c. Dark grades, both comb and extracted, not wanted at low prices.

S. H. Hall & Co.

Buffalo, Nov. 11.—Strictly fancy honey is very scarce and held at 13c; occasionally 14c; but it must be perfect goods; fair to good white, 11 to 12c; if much soiled, 9 to 10c; dark grades, 7 to 8c. Trade is good for all qualities and no large stocks in market. Extracted, 5 to 6c. Beeswax, 24 to 28c.

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38th Year. CHICAGO, ILL., NOVEMBER 24, 1898. No. 47.

CONTRIBUTED ARTICLES

Dried-Up Foul Brood—Cocaine for Bee-Stings.

BY PROF. J. A. COOK.

I have a letter from a Los Angeles county bee-keeper, accompanied by a specimen of foul brood which has dried down in the corner of the cell. He asks if it is foul brood, and wishes to know how one can tell if the disease is present at such times, and if it can be positively told.

I should like Mr. Taylor to reply to this question. In this case it is not difficult at all to surely diagnose foul brood. The odor of the disease is unmistakable. The comb was in a close tin box, and, so, very favorable for such determination. As all know who have had any experience with this malady, the odor is very pronounced, very penetrating and unmistakable. When my children were small, I used to get many samples of diseased brood. The children would frequently bring me the mail, with the box containing the diseased brood still wrapt in paper, with the remark, "You have more foul brood." I found that a sample with very considerable amount of the brood—a score of cells, more or less—would very frequently be revealed before any of the wrappings were removed.

In the case of this sample before me, there are other signs. Cells with sunken caps, and with some of the caps perforated, would surely arouse suspicion. In Southern California, the bees can get some honey nearly, if not quite, every month of the year, and so brood-rearing has not that long quietus that is known in the East. So I think this question has not the practical importance that might be given it. In the East the bee-keeper is behind the times whose information and alertness does not enable him to know and detect this disease, while the bees are active. In case of buying bees in the fall, there might be occasion to make such examination.

The scale of dried matter is hardly sufficient for determination, at least by other than the expert. Of course, the bacteriologist could always make cultures and ascertain the presence or absence of the fungoid matter, but this would not be of use practically. I, for one, would be glad to hear from Mr. Taylor on this subject, as also on the matter of hives. The "Inspector" of Ontario says it is safe to use hives from which diseased colonies have been removed, at once, if I understand his position, without subjecting them to a boiling temperature. His long experience should make him an authority. If boiling the hives is needless, it would save much trouble. From the nature of the disease, we would fear to trust such a hive until it had been thoroughly disinfected. I am sure if Mr. Taylor will give his views in these matters, he will confer a favor.

I think foul brood is quicker to lose its grip in California, and sometimes at least is not so virulent as in the East. I know of more than one apiary where there were colonies badly affected, where no pains were taken to eradicate the disease, and yet it has entirely disappeared. This, however, should not quiet the apprehensions of any menaced bee-keeper, for I have know other cases where apiaries went all to pieces the second year after the disease made its appearance.

BEE STINGS AND COCAINE.

In a recent number of "Nature," cocaine is given as a speedy remedy from the pain of bee-stings. It is stated that simply applying it will immediately relieve suffering. In succeeding numbers of the same journal it is urged that care should be exercised in the use of this drug. That the warning is timely, appears from the fact that in many cases its use is attended with quite serious consequences. I think all reputable physicians agree that we cannot be too cautious in the use of any of the narcotics, like cocaine, morphine, etc. In rare, exceptional cases they come as very angels of mercy; but one is very unfortunate who is called to use them with frequency.

Los Angeles Co., Calif., Oct. 31.

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No. 3.—The Care of Bees for Wintering.

BY C. P. DADANT.

In my last, altho I called attention to the bad quality of fruit-juice as winter food, I have perhaps not laid enough stress upon it, for I consider, from actual experience, that the results of a supply of this food are deadly to the bees; the more so as they store a great deal of this kind of food when the real honey has failed. This fruit juice is not honey; it is neither more nor less than cider, which becomes more or less acid, and is positively sure to cause disease. The only way to

Prof. A. J. Cook.

deal with this food, if one wishes to save the bees, is to extract it out of the combs, and furnish the bees with more wholesome supplies.

Of all the grades of honey for wintering, honey-dew is the worst; next comes dark fall honey, especially if thin and watery, or if uncapt, as the moisture escaping from the bees will render it still worse. The hygrometric properties of honey are so markt that, during a damp season, unsealed honey will often accumulate moisture enough to overflow out of the cells, and will perhaps besmear the bees as they first bestir themselves after a period of constrained repose. Hence it is advisable to remove, in the fall, all unsealed honey; most especially if the bees have enough without this. If the quantity is limited, it is not so urgent to remove it, as they usually consume the unsealed honey first, and may get rid of it before the coldest weather, which confines them to the hive for weeks at a stretch.

There is another source of injury to the bees in fall honey which is heavily loaded with floating grains of pollen, and is the more dangerous that it is least easily detected by the apiarist. These floating grains of pollen are not discernible to the naked eye. The best bee-food for wintering is that which contains the purest saccharine matter, as it is most thoroughly digested by them, with the least production of discharges. Since the bees are often compelled to remain, for from three to six weeks, confined to the hive, and during that time are closely clustered together, it is out of the question for them to void their excrements, and when the food which they eat contains a great deal of pollen, or is too watery, they are often unable to retain their discharges, and must either go out and perish, or release their bowels in the hive, thus besmearing the combs and their sister bees, with the most foul and offensive excrements. In either case, it is death.

When the bees are in a cellar, the evenness of the temperature, under proper conditions, enables them to consume a minimum quantity of food, and they stand a much longer confinement with ease, if the food is right, than when out-of-doors. From the above statements, which are based upon over 40 years of wintering experience with large apiaries, the reader will readily see that the best winter food is to be found in the very best grades of honey. In a mild winter, as I will show farther, anything will do, for if the bees are not confined they have nothing to fear. When the crop is short, if good honey cannot be had in sufficient quantity, the artificial supply may be provided, by adding sugar syrup to a certain quantity of honey, and very good feed may be made by using a mixture composed in the following proportions: Sugar, 50; water, 25; honey, 25. The water is first heated to the boiling point, then the sugar is thown in, and after it has slightly cooled the honey is added.

Feeders of all kinds are made, and it is not the purpose of this article to recommend that such a feeder be used as will enable the bees to take their food above the combs and as close to their brood-nest as possible, to avoid the depredation of heat.

I said that from 25 to 40 pounds were needed, but have given no way of ascertaining the quantity, short of weighing the hive, which is impractical in most instances. Those who are accustomed to handling bees usually judge of the amount by the space occupied with honey, and this is probably the best criterion. We would call a hive sufficiently supplied if the honey occupied about one-half of eight combs, the upper half of course, since bees always place their stores above and behind their brood. But we use hives with 10 combs, and like to see these 10 combs half filled, at least. Too much honey is better than too little, and if we would have success with bees, we should not begrudge them a little more than they are likely to need. But it is necessary for them to have a sufficient space of dry comb at the bottom to cluster on; for they fare much better, and keep warmer, if they can keep the bulk of their cluster below the honey, on empty cells.

We will next consider the advantage of winter flights, and of shelter. Hancock Co., Ill.

⁂

Frame Spacing at Top and Bottom.

BY A. P. RAYMOND.

I am aware that frame spacing is an old, well-worn topic, having been thoroughly discust many times, but I am also aware that many bee-keepers are not as yet giving this matter as much attention as its importance demands, consequently I trust I may be pardoned for again referring to the subject.

No feature connected with the use of loose-hanging frames should receive more careful consideration than that of spacing. Every practical bee-keeper is cognizant of the fact that frames of comb are of the greatest value when they are perfectly straight, the cells being of equal length upon either side, for they are then interchangeable and can then be placed in any part of any hive in the apiary without inconvenience to ourselves or the bees. They can also be readily turned end for end in a hive, which is often necessary.

Experience with loose-hanging frames has convinced me of two facts, viz.: If we are to obtain the best possible results from their use the combs must be built in them evenly and perfectly, as described above; also, if we secure such straight, even combs, the frames must be *accurately* spaced.

Now, what I mean by frame spacing includes not the tops only, but the bottom of the frames as well. If we take the trouble to space but one side of the frames let that be the bottom—the tops are where we can readily see them, and by using our eyes as guide we can space them quite accurately, the only difficulty being that they will not stay spaced while handling or moving the hive. We may construct our frames ever so carefully, having them perfectly true and entirely out of the wind, and still we are not relieved of the duty of bottom spacing, because however truly an empty frame may hang in a hive, when it is filled with comb, brood and honey, it may be found hanging out of plumb, caused by more brood or honey being placed upon one side of the comb than upon the other. Now, when a frame hangs out of plumb, the bees make the matter still worse by lengthening the cells upon the heavier side and putting in still more honey; if the opposite side contains brood the cells of course must remain only the proper length.

If we wish to remove a frame and place it in another hive, and we find it in the condition described above, it causes trouble to ourselves and extra work for the bees. The fact establisht, that the duty of frame spacing is imperative if we are to receive the best results, the question now arises, what method of spacing shall we adopt? For the benefit of those who wish to use it, I will give a method of top-spacing which I have recently devised, and which I think, without being egotistical, is superior to any other with which I am acquainted.

After removing the head from a six-penny wire finishing-nail drive it longitudinally into the end of the top-bar of the frame directly underneath and close to the projecting end. It should be placed directly in the center of the bar transversely, and driven in until the out end of the nail is flush with that of the bar. Now, with a three-cornered file I make small V-shaped depressions or notches upon the upper edges of the metal rabbets, which are used in the hives, 1⅜ or 1½ inches apart, as may be desired, and just deep enough to correspond with the diameter of the nail, which, being driven in, has now become apart of the projection of the top-bar. (Do not make the depressions too deep, about ⅛ inch is sufficient.)

When the frame is placed, as now arranged, in the hive, the nails which have been driven underneath the projecting end of the bar rest at right angles upon the metal rabbets, and will quickly drop into the depressions as they strike them, and the entire width of the projection will rest upon the rabbet. The weight of the frame will hold itself in place. These depressions should in every case be V-shaped, as the frame may then be crowded upward and also to one side with only one motion. They may be more rapidly made by machinery, or possibly with a steel punch and a hammer; this applies of course to the construction of new rabbets. I think that by using a small file the depressions can be made in the rabbets of the hives already constructed without removing them from the hive; it may be rather slow work, but you will never regret the time spent, as it will save much valuable time in spacing frames during swarming, when one minute is sometimes worth more than are 10 minutes at some other seasons of the year.

This method may also be adopted by those who do not use metal rabbets; by using a chisel the V-shaped depressions may be made upon the wood rabbets of the hive; in such case the depression should extend across the entire width of the rabbet, and it would probably be better to use an 8-penny nail instead of a 6-penny underneath the projection of the top-bar, and consequently a little deeper depression in rabbet.

I believe this method has several advantages over the staple or nail methods of spacing. The nails underneath the projections of the top-bar are not in our way in the least while manipulating the frame; the frames can be readily and very easily moved to one side, allowing us to remove a central frame from the hive without first removing the dummy or division-board at the side.

Again if we wish to store a quantity of frames, either empty or otherwise, they occupy less room than if their sides contained nails or staples; the nails resting upon the metal rabbets prove an advantage in moving the frame from side to side in the hive, as they glide very easily along the edge of the rabbet.

The simplicity and cheapness of this method are also in its favor.

For a bottom spacer I have never seen anything I liked as well as the one made of wire, described in Langstroth Revised. Some may object to this spacer because it is old, but I would not discard it until a better one is invented to take its place. This spacer, however, is greatly improved and strengthened by taking a strip of firm, straight-grained pine or basswood ¼x½ inch, and a little longer than the width of the hive, and cutting a saw-kerf the entire length directly in the center of the strip upon the widest or half-inch side ⅛ inch deep. Now take the wire spacer after it is carefully made, and press it firmly into the saw-kerf; it requires no fastening to hold it in the kerf, providing the kerf is the proper width, that is, a trifle narrower than the diameter of the wire used. By using this strip we are enabled to use a smaller wire than we otherwise would, and still our spacer is very strong; the smaller wire is more easily and rapidly bent the required shape.

The strip can be placed in position in the hive by making a very shallow mortise upon each side about 1/16 inch deep, and springing the strip into place.

We should place this spacer in the hive so there will be a ¼ inch space between it and the bottom-board.

It is a little trouble to arrange our hives with spacers, but we will be amply repaid by doing so.

Clark Co., Wis.

CONVENTION PROCEEDINGS

UNITED STATES BEE-KEEPERS' UNION.

Report of the 29th Annual Convention Held at Omaha, Nebr., Sept. 13-15, 1898.

DR. A. B. MASON, SEC.

SECOND DAY—Forenoon Session.

[Continued from page 724.]

PARAFFINED SEPARATORS AND FENCES.

"Who has had any experience with paraffined separators and fences? and what is your opinion of them?"

Mr. Danzenbaker—I can claim that I have had some experience. I believe I was the first one to mention the matter. Here is a sheet of paraffined paper. The intention was to use this in covering over the super, and you could put a covering over it—a piece of carpet, or a piece of enameled cloth. The intention was to keep the other clean. When you use enameled sheets, you always have to clean them off. Use them once, and if they get soiled they stain the sections wherever they touch. This paper is clean; you can use it once or twice and then throw it away. It is very cheap. The question is, how long will it last? Here is one piece that has been used several times. Some say the bees eat it. There is no hole in that piece: this sheet is cut along the edge. That was put on right in the height of the white clover honey-flow. The bees don't eat it for me, only where it is not prest down tight. Where it is used with weight enough on it to hold it tight, they won't cut it out. When used for separators, without any pressure on the other side, they cut it, and I abandoned using it in that way. The bees will gnaw it if it is laid on the super without anything over it. For separators it will not do.

Mr. Hatch—I would like to say that I used paraffined paper last year, and I found it perfectly worthless. It was no better than so much newspaper laid over the combs. The bees will gnaw through it in no time. And if the wind is blowing, it takes three boys and a man to put the sheets back on the hives when they are taken off.

Mr. Danzenbaker—The intention in putting that on is to have it done in the shop, not in the yard. In examining the supers I don't take the sheets clear off: I just raise up one corner.

A paper written by S. T. Pettit, of Ontario, Canada, was then read by the Secretary, as follows:

Advanced Methods of Comb Honey Production.

The subject assigned me is an important one. The greatest difficulty in dealing with it consists in the large number of supposed-to-be superior systems, and every one wedded to his own. But for all that, the advancement recently made in the fine art of taking comb honey is marvelous indeed, and I often admire men and methods.

Presuming the object in view was that this paper shall be helpful rather than a delineation of many and conflicting methods, I shall in the main confine myself to my own system, believing it to be the best.

First of all, quality and reputation must be maintained, even if necessary at the expense of quantity. The comb foundation must be faultless. The filling of the brood-chamber at the approach of the clover flow or main crop with sugar syrup, I regard as a most pernicious practice. I state this with due respect for the views of others. Later on I will give a better way.

May I digress long enough to state that the statutes of Canada, when any such syrup reaches the supers and is offered for sale, make such practice a willful adulteration, and the Government, at its own charges, will do the prosecuting.

It is no digression to state that perfect wintering is a mighty factor in the production of comb honey.

It is not enough to bring 95 or even 100 percent of our colonies through the winter alive; we should see to it that they are practically in the same condition that they were at the approach of winter, with plenty of stores, healthy and strong, and able to rush out and catch the first and every honey-flow coming within reach.

And then the spring management must be such that the brood-chamber at the time of giving section supers is practically full of brood from side to side, and from front to rear. Briefly, then, to this end brood spreading, timely and judiciously, with some uncapping, generally must be practiced.

And now for the better way: When the spring flow sets in sharply, in order to leave the whole brood-chamber to the queen, and to provide against the practice of feeding sugar syrup, extracting-supers must be given. These, with their contents, are left on to keep up brood-rearing until clover yields freely. These supers are then removed and comb honey supers take their place.

Generally, at this time, if the work has been well done, the brood-chamber will be practically full of brood, which will be of far greater value than sugar syrup, and it costs nothing; and your comb honey will be pure, and your reputation unsullied. With this management no bait combs, half-supers, nor double brood-chambers will be wanted. The bees will go up for "standing-room," and go to work with a right good will.

I must not forget to state that at the time of changing supers the combs containing the most and youngest brood should be placed next to the sides of the brood-chamber. This will make more room for the queen, retard swarming, and force the honey into the sections; and then when swarms do issue their numerical strength will gladden your weary hearts, and cause you to rejoice in hope of a rich reward.

The large entrance has become an indispensable necessity in my practice. For that purpose I used the wedges so often referred to; and the dividers for creating a double bee-space at the outside of the sections, are also indispensable; the former distributes the bees, and the latter hold them just where wanted—so much so that sometimes the outside and rear sections actually get ahead of those near the entrance, but that is not the rule.

The habit of the young bees meeting the field-bees above the entrance near the center is so strong that a cluster is sometimes formed, and the field-bees continue to go up at the center; but a little cool weather will usually break that up, and proper distribution will follow.

Hive swarms on starters, in hives contracted to about two-thirds of the size by the use of dummies. Let them remain upon the old stands, and at once transfer the supers to the new swarms. A queen-bar or queen-excluder must be used. Give shade and a lot of top ventilation, which should be closed on the fourth or fifth day in the cool of the evening. We may yet learn how to continue top ventilation with much profit.

What seems to me the most difficult thing is to give the right amount of super-room. I would say, be careful to give enough, and be just as careful not to give too much. But what's enough and what's too much? How shall we know? Well, I reckon from existing conditions and prospects, years of careful observation and practice will guide us pretty well.

Want of space forbids giving many pointers. My experience with deep-cell foundation, fence separators and plain sections is too limited to be of value. But whatever changes we do make, I hope we will not depart from the standard 4¼x4¼ section—the cost will be too great for an imaginary gain.

NOTE THESE FOUR POINTS:

1. Foundation should touch the sides of the sections and come to within one-sixth of an inch from the bottom-bar.

2. I have used thousands of bottom starters, and fail to find much benefit from them; but I have found this, that if they overlap a quarter of an inch or so no harm will result; the bees will cut them to fit, and unite them all right.

3. If holes are found in the septum of foundation the bees lose time, and add too much wax in mending.

4. Feeding back, on account of granulating in the sections, should be discouraged. S. T. PETTIT.

Mr. Spaulding—I disagree with one point in regard to bottom starters. I find them a great benefit. I used to notice that the bottom pieces of the sections would be pulled away by adhering bur-combs, but since using the bottom starters the bees fasten them so securely that I rarely if ever pull off the bottom of the section in removing the honey from the hive. I use a starter about a half inch.

Mr. Hatch—What kind of super do you use?

Mr. Spaulding—I have used the plain sections and the super that goes with them.

Mr. Westcott—I would like to hear whether there is anything really gained by using full sheets of foundation, or whether there is enough gained to pay the cost of buying the foundation. I have tried both ways, and really the results have been about as good with a good, fair starter as with full sheets of foundation.

Dr. Miller—It might be instructive to ask the question, How many have tried both ways, and how many prefer only small starters?

On a showing of hands, 21 were found to have tried both plans, 17 of whom preferred full foundation, and 4 of whom preferred starters only.

Mr. Danzenbaker—I would like to say a word in regard to the matter of 4¼ inch sections. Here is a 4x5 section, and here is one 4¼x4¼. I will stand them right up here together. Let me say another word, as it was printed in the journals—both in the American Bee Journal and Gleanings—that I use bottom starters, I think I am entitled to say that I do not. Some five years ago I bought some foundation that was intended to be used in certain sections, and it wasn't deep enough to reach as far as I wanted it to, and so I was forced to use bottom starters to piece it out. I didn't like the plan. In putting in foundation, I always leave a bee-space so the bees can pass under. They fasten it at the bottom as soon as they do at the sides. This little box of honey here, I will venture that I can put it in the express office and ship it to Washington, and that it will go all right. I shipt one from Washington to Gray Gables, to Mrs. Cleveland, and got a letter saying that it went through in good order. Again, about the size and shape of the sections. A pound of honey is just as heavy in the 4x5 sections as in the other form, and when you come to sell them, the 4x5 sections sell more readily. I can sell the 4x5 faster than I can the other. It makes a bigger show. When I sell honey to consumers, I tell them to take their choice, and one time I sold 48 of the 4x5 sections to two of the others. The 4x5 sections don't hold any more honey, but they look bigger; 48 of the 4x5 weighed 47 pounds; 100 of this other size, with cleated separators, weigh from 93 to 97 or 100 pounds, depending on the season. This year was the driest I have ever known, and the comb was not filled out quite so well. I cannot agree with the statement that it is so expensive to change from the 4¼ sections. There is no need of the sections costing any more, and the supers can be changed very easily, by nailing a ¾ inch cleat on. The expense of changing is almost trifling; the sections will cost no more, and the cost of nailing the cleat on the super will not exceed 5 cents to the super.

A. I. Root—Mr. Acklin has some figures in his memorandum book that he could give us in regard to the relative cost of producing comb and extracted honey.

Mr. Acklin—At our out-apiaries 3 cents a pound was the actual cost for extracted honey, and 6½ cents a pound for comb honey.

A. I. Root—That agrees with Mr. Hatch's 3 cents a pound in Arizona.

Mr. Hatch—He says he figured the actual cost of extracted honey at 3 cents a pound. I sold my crop at 3½ cents, and cleared up $1,100 for the services of myself and family for the summer, excepting our board-bill.

Dr. Mason—How much did the honey cost per pound?

Mr. Hatch—I could not say. We paid all hired help and all expenses, except our board-bill. I was an invalid, and did not do anything for six weeks. Mr. Acklin gave 3 cents a pound as the cost of production. If I could get 3 cents a pound in Arizona, I could make money.

Mr. Acklin—Don't you get larger crops in Arizona than we do in the northern part of the United States?

Mr. Hatch—My average, with 550 colonies, was 120 pounds of extracted honey.

Mr. Acklin—Do you keep those colonies in one apiary?

Mr. Hatch—No, sir; they are in three apiaries.

Dr. Miller—Here is something that is of very great interest to us, and that is as to the size and shape of the sections; and right here is the place where we can get information upon the subject that perhaps we cannot get anywhere else, as to the relative value of the two kinds of sections. I for one would like to know if there is really any advantage. If the 4x5 sections are worth more, I must change, but I want to be pretty sure of my ground. I don't want to pay out $50 or so unless I am pretty sure there would be money coming back to me for it. The question is, whether those who have had experience with both kinds of sections can tell us whether the deep section is better than the square.

Mr. Westcott—I think there is a good deal in being used to them. A three-cornered section might look nice for awhile, because it would be something new; but after I have lookt at them for awhile I like the looks of the square section as well as I do the other. I don't know why the honey won't sell just as well, either. If we change from one to the other, it will cost a great deal. The bee-men mostly have supers for square sections, and when we make these changes they add a great expense.

Pres. York—We are not considering the appearance of the honey that is now in these sections, but the shape of the sections themselves. The honey is not of the same grade in both sections. Will those who prefer the tall sections please stand and be counted?

Ten declared themselves in favor of the tall sections, while 15 declared in favor of the square sections.

Mr. Hatch—I ran 250 colonies for Mr. Mendleson last year. I like the Danzenbaker hive and section first rate, and always have. Mr. Mendleson took some of the honey in these sections and went into a store where they were paying 9 cents for just the same honey in other sections, and he got 11½ cents for his. They had none of the tall sections, but they could get plenty of the other for 9 cents. They have a fancy trade at Los Angeles and Pasadena, where there are a great many wealthy people who don't care for cost. If a thing suits them they will take it and pay for it. To cater to that trade it is certainly desirable to have that kind of section.

Dr. Miller—Suppose there had been on the market the same number of square sections as of the tall ones, or suppose the tall sections had been in the majority and the square ones in the minority, would the same relative prices have held good then, do you think?

Mr. Hatch—Of course I could not answer that question, because I don't know. There was no shortage of the square sections; there was an over-supply, if anything.

Mr. Danzenbaker—I am sorry to see that the majority of the convention are in error on this matter. The expense of the change doesn't amount to anything. I have been in the business for a good many years, and have tried a good many changes; I am always changing where there seems to be anything to be gained by it. I met Capt. Hetherington, and in talking about the tall sections he said they sold better. I wanted to buy a case of his honey, and he said it was all sold. He produced 30 or 40 tons of honey, and it was all sold before it was produced. I said I wanted one case, at any rate, but he said it was all contracted for, and at that time he got 17 cents—about 2 cents above the market. I begged of him a half-dozen sections, and took them and put them on a hive, and I was surprised to find that in the same super they were the best filled and the best finisht. Then I got a thousand, and took them to market to find how they would go with the people. I set the tall sections upright, and told my customers to take their choice. I sold 48 of the tall sections while I sold 2 of the others. Then I put 2 cents more onto the price, and that didn't stop it. Then I laid the tall sections down the other way, and I was lost! It depended on whether they were standing up or lying down. I was in stores where honey was sold in 2-pound sections, and they were the best finisht I ever saw. They were finisht at the top and bottom alike. Only an expert, who knew the pitch of the cells, could tell which was the top and which was the bottom. Those sections were selling at 15 cents, and the others were selling at 10 cents. I askt, "Don't you lose money selling 2 pounds for 15 cents when the other sells for 10 cents a pound?" He says, "I can make more money producing honey at 2 pounds for 15 cents in those sections than I can at 10 cents a pound in the others. I can get so much more of it. They go to work quicker, and finish it faster." I took this year 900 finisht sections from 14 colonies, and it has been the driest year I have known since I have been keeping bees. One of my neighbors who had 300 colonies with the other sections didn't get a single super filled, and he was right in the same locality. This year I didn't get the honey quite as white as I wanted it, because the blue thistle was a failure. This honey that I have is a mixture of sumac and other flowers. I sell my honey in Washington, and I get 15 cents for all 1 grade as No. 1, and 13 cents for No. 2. I can go into Washington and buy the other for 11 cents, while I am getting 13 and 15 cents for mine, and I have a good market all the while. If you will try the change, you will find the difference. I would like to ask if there is a single man in the United States who has ever used the tall sections that was willing to go back to using the square sections.

A Member—I bought the Danzenbaker hive a couple of years ago, and 1,000 of the tall sections, and I went to work and got them filled and took them into the Salt Lake market. They lookt well, but I couldn't sell them as I could the others.

The convention then adjourned until 1:30.

[Continued next week.]

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

An Explanation of the Delayed Answers.

Some of the friends will find their questions answered in this number which they expected answered several weeks ago. Please don't lay the blame on any one in Chicago. It lies some 60 miles Northwest of that wicked city. The questions were promptly answered, put in the envelop to be taken to the office, and by some mysterious process hid themselves out of sight in the vehicle in which they were to be carried, only to come to light when a snow-storm made it necessary to shake out the carpet on the floor of the vehicle. I can only say I am exceedingly sorry for the delay, but ask that you will lay no blame on the shoulders of the already overburdened editor.

C. C. MILLER.

Two Hive-Stories for Wintering.

I have noticed in recent issues of the American Bee Journal that you speak favorably of the plan of wintering strong colonies of bees in two-story hives. Without knowing any thing about your practice in this matter, I venture to presume that you place a hive filled with frames of comb under the colony in the fall and leave it there until it is time to put on supers the following spring. In the absence of frames of comb, would you fill with frames of foundation? And in the absence of both frames of comb and foundation, would you venture on the use of frames having starters of foundation only?

I have a good many hives in which the bees seem to be too numerous to winter comfortably without more room. My stock of combs is used up, and I have no sheets of foundation on hand, but can procure them if necessary. I have some foundation cut into wide starters. What would you do under the circumstances?

IOWA.

ANSWER.—One of the reasons for having a second story in winter is to have more room for a strong colony. I don't believe, however, that this counts for such a great deal. The strongest colony you have will very likely have no difficulty getting inside the hive, come cold weather. Another object is to have combs below to contain extra stores, so there need be no sort of question as to whether the bees will need feeding before flowers yield. Still another object—and I'm not entirely sure just how much weight it should have—is to have the cluster of bees somewhat removed from the outer air, so that a cold blast of wind will not strike so directly on them. If I am correct in these views, the best thing is to have in the story that is below, combs containing more or less honey. If you have no combs containing honey, then empty combs will answer the purpose, only you may have to look out for feeding in spring, altho not necessarily so. The empty combs will do to cluster on, and will serve as a wind-break. If you have no combs, it is quite possible the under story may still be of advantage, for the blast cannot blow so directly upon the cluster as with only one story. But I don't see any special object in having frames partly or wholly filled with foundation. With plenty of room below the frames, the bees will cluster as well upon air as upon starters. And you may be pretty sure that after the bees have wintered upon foundation it will not be so acceptable to the bees. The only good I can think of that would come from having starters or full sheets of foundation in the lower story would be in providing so much of a hindrance to the free force of the air, and you could secure this in some other way. A little board might be dropt inside that would prevent direct passage, but would provide plenty of room for the bees to pass around it. A man with your inventive turn may think of better ways, but certainly I don't believe you ought to let the bees have foundation over winter, either full sheets or starters. If you leave a lower story without combs or frames, you will in some cases have combs commenced on the bottom-bars, but this is a small matter, as the loss is small, and the bits of comb are easily cut off.

Oats Chaff for Winter Packing.

Will oats chaff be all right for packing around hives for winter? I see wheat chaff and planer-shavings are generally recommended, and as I cannot get either of these, I thought it possible oats chaff would do as well.

KANSAS.

ANSWER.—Oats chaff will do very well. Be sure to keep it dry.

Cellar Temperature for Bees.

Is there danger of getting a cellar too warm for bees? Suppose the temperature was up to 65° for any length of time, would it do any harm? Do you know of any case where the temperature was so high that the bees did not winter well?

MICHIGAN.

ANSWER.—I doubt whether there is much danger of a cellar being too warm, *providing* the air in the cellar is all right. With good, pure air, 65° could be borne for a considerable time, and it might do good to have that temperature for a day or so when the bees become uneasy in winter. It is possible that 65° continued for a week or two might start bees to breeding—an undesirable thing in winter—but with pure air, darkness, and quiet, I should hardly expect it. I think there have been reports of bees being kept too warm in winter, but I cannot now say by whom. It is generally considered that somewhere about 45° is the best temperature for bees in a cellar. If you can control the temperature, keep it at that point where the bees appear to be in perfect quiet.

Hive-Entrance and Packing in Winter, Etc.

1. How large ought the entrance of a hive to be throughout the winter, when wintered on the summer stand?

2. I have a few colonies in a pear-orchard. How would it do to put up a wall on the north and the west sides of each hive, making it double, then pack with forest leaves, and also put a cover over them to keep the rain and snow off? Does it make any difference how far off the wall is?

3. I have a colony in a box-hive that did not swarm all summer; sometimes they hung out until it seemed as if there was no more in the hive, but the hive was yet full and they had plenty of honey. Once they were all in the hive and I could see nothing but drones on the alighting-board. What was the cause of all this?

4. Do ants stay in the hives through winter?

5. My bees have been carrying pollen all summer, and up to to-day (Sept. 22), they are still carrying it. Do they need so much to winter them?

6. How much ought the body of a Langstroth hive weigh with a strong colony and full of honey?

ILLINOIS.

ANSWERS.—1. The general practice favors an entrance the full width, and ⅜ to ½-inch deep.

2. It ought to answer well. Yes, it makes a difference. Let the wall be as near as convenient.

3. It is nothing very strange that a strong colony should go through the season without swarming, and many a beekeeper would give money if all his bees were of that kind. Very often you will find the drones clustered together on the bottom-board, especially when forage becomes scarce and the

workers have decided they don't care any more for the company of the drones.

4. If there is a place where the ants can get, and the bees cannot reach, as for instance when quilts are used, ants may stay all winter, the heat from the bees being agreeable to them. Nowadays very many use plain board covers, and these furnish no hiding-place for ants, either summer or winter.

5. It's hardly so much for winter that they're carrying it in as for daily use. They'll winter without any pollen, but they'll not rear brood without it.

6. If an 8-frame hive weighs 50 pounds, including plain cover and bottom-board, it is likely to have enough stores for winter, but it will not be a bad thing to have it heavier. Perhaps a 10-frame hive ought to weigh nearly 10 pounds more.

Dividing for Increase

Did I do right last spring in dividing my bees? There was a heavy colony from which I took three brood-frames that had eggs. I didn't know whether there was any queen-cells or not. I have 22 colonies, and they have done very well this summer. I sell my honey at home for 8 and 10 cents a pound.

MICHIGAN.

ANSWER.—From the testimony you give in the case there is no evidence you did anything wrong. At the same time while one might take three frames with eggs and manage to perfection, one might also take three frames with eggs and manage pretty badly. One of the best investments you could possibly make would be to get a text-book on bee-keeping and study it thoroughly. Then, knowing fundamental principles, you might manage many different ways in making increase and be right in all of them.

Introducing Queens—Wintering.

1. When is the best time to introduce Italian queens?

2. Where the chaff hive is not in use, what is the best method for wintering bees? KENTUCKY.

ANSWERS.—1. That's a matter that depends a good deal on one's own convenience. If it is a colony run for honey that is to have the stranger introduced, it will interfere less with the honey crop to introduce toward the middle or end of the honey harvest. But if you wish to rear other queens from the new stock, it will be better to introduce at or before the beginning of the harvest. The advantage of being able to rear queens from the new stock will more than counterbalance the disadvantage to the honey crop.

2. For some places cellar-wintering is best, and for some it is better to winter out-doors. As far south as Kentucky you will probably do better out-doors, providing some shelter against wintry blasts, unless the bees are in a location naturally sheltered from prevailing winds.

One or Two Stories in Winter—September vs. May Queens.

1. I have my bees in dovetail 8-frame hives. Is it preferable, in wintering on the summer stand, to use one or two stories?

2. Will queens reared in September be as prolific as queens reared in May, drones being present? N. C.

ANSWERS.—1. If you have the hives on hand, you may as well use the two stories. I should rather have the two.

2. That depends on weather and pasturage. If the weather is cool in May, and there is little or no pasturage, queens will not be as good as those reared in good weather with good pasturage in September. If the weather is warm in May, and there is good pasturage, queens will be better than those reared in bad weather with poor pasturage in September. Take the average May and the average September, and in some places one will be better and in others the other. Because in one place the weather and pasturage will be better in May, and in others in September.

What Ailed the Bees?

I bought four colonies of Italian bees in the spring, and sold two of them to my neighbor, thinking two was enough for me to begin with. One of them did very well. I have four new colonies and the old one. I got about 200 pounds of honey from them. The other one didn't do much. It stored some honey, but did not put any in the super. It seemed to have young bees and brood nearly all the time, but they were all the time dying. They would get weak and stupid, and die; hang around in the hive and drop down on the bottom dead in handfuls a day. They would drag out what they could, and finally they all died, leaving in the hive about 30 pounds of honey.

1. I would like to know what was the cause of their dying.

2. Is it safe to eat or feed the honey to bees?

3. Is it safe to give the frames with the honey and comb to new swarms in the spring? KANSAS.

ANSWERS.—1. It's hard to say what the trouble was. It might be paralysis, it might be pickled brood, and there's a bare possibility it might be foul brood. If paralysis, a leading feature will be the trembling of the bees and the shiny black appearance. It will be worth your while to look up the matter of pickled brood in back numbers of the American Bee Journal, and to get Dr. Wm. R. Howard's little book on foul brood. Then you will be able to judge the case better than one who is not present.

2. It will be safe for you to eat the honey, but until you are sure there is no foul brood in the case, don't feed it to the bees.

3. Not unless you're sure there's no foul brood in the case.

Smoker-Fuel—Sowing for Bees—Propolizing.

1. What is the best thing to use to smoke bees? I have been using little pieces of wood such as I could pick up around the yard, but it just seems to set the bees to fighting, and they come right to the top as quick as I start to smoke them.

2. What do you think is the best thing to sow for the bees? Will buckwheat stand the frost? And what is the right time to sow it?

3. Is there any way to prevent the bees from sticking the sections in so tight that one cannot get them out? There are lots of balm or cottonwood trees here, and it seems to be the gum from the buds of these trees that they stick them with. There is also a great deal of it in the honey. IDAHO.

ANSWERS.—1. Almost anything will do for smoker wood. Perhaps nothing is better than sound hard wood cut up into proper size to burn well, say pieces ¼-inch square, and as long as the smoker will take. But it's a good deal of work to prepare such fuel, and chips from the chip-yard, such as you are using, will answer just about as well. Something else besides the character of the fuel is at fault that makes your bees cross.

2. Buckwheat will not stand frost at all. Sweet clover will do as well in that way as perhaps anything else you can try. Buckwheat may be sown about the first of July.

3. Probably you'll never find any way to prevent the bees from bringing in propolis and filling up all cracks with it. It will do some good to have the sections so close together that there will be little in the way of cracks to fill. But where bees glue badly they will plaster the glue over the plain surface of the wood if there are no cracks to fill. Take off sections as soon as sealed. In that way you'll save some gluing.

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for $1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at $1.00), and 10 cents extra.

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

The Names and Addresses of all your bee-friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums we are offering. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.

BEEDOM BOILED DOWN

Domestic Comb Foundation is thus made, as given in Southland Queen: Take a piece of cotton-cloth, dip it in beeswax, lay it on a lot of peas, pile peas on top, press with a board, and you have your foundation!

Italians Working Where Blacks Don't.—L. B. Smith reports, in the Southland Queen, that his Italian bees work on a plant like Canada thistle, one variety of horsemint, and prickly pear, while blacks do not touch them.

Severe Effects of Stings, as nausea, palpitations, faintness, etc., the editor of Revue Internationale says investigations show to come only to those whose hearts are affected, and such persons should at any cost avoid being stung.

Foul Brood Smoked Out.—Alex. Astor reports in Revue Internationale that he cured foul brood by vigorously smoking every two or three days in the evening for two weeks. Editor Bertrand thinks a cure might be thus effected in the early stage of the disease before any spores are present.

A Warning is given by the Canadian Bee Journal. Last winter was very mild, and those who saw their own or their neighbor's bees come through safely on the summer stands without protection, may be tempted to leave all without protection this winter. But this winter may be severe, and the part of wisdom is to prepare for the worst.

Bees Defending Against Robbers.—F. A. Jacot says in Revue Internationale that Italian bees defend themselves best against robbers, Cyprians being close seconds, and Carniolans very poor unless crost. When he finds a colony that will not defend itself against robbers, he unites with it a small number of bees from a colony known to be good fighters, and the robbers will have no quarter. The irritation caused by changing seems to redouble their combativeness.

Plain Sections as to Grading.—Byron Walker, who produces large crops of honey and buys and sells thousands of pounds besides, says in Gleanings that honey stored in plain sections enters into the fancy grade in much larger proportion than that in old-style sections. W. C. Gathright says in the same paper that there is no doubt about bees working faster in plain sections with cleated separators. But he insists that the top of the separator should be ¼-inch below the top of the section.

Bee-Keeping on the Mississippi.—The American Bee-Keeper copies from the New York Herald the following: "It is said that the idea of moving bees to pasture is carried on to a large extent along the Mississippi, where the hives are taken from place to place down or up stream on flat boats, that anchor during the day and are moved on at night while the bees are all in the hives, thus keeping them in fresh pasture all the time." Isn't that something that was done years ago, but not now, Mr. Hill?

Honey Coloring in Wax Extractor.—Complaint is made by some that when cappings are put in a solar extractor the honey is spoiled by being heated and made dark. John Newton says, in the Canadian Bee Journal, that he shades the honey-receptacle by putting a small piece of board right under whatever the wax is run into, just leaving space enough for the drip to run into. Each day's cappings are put into the extractor and melted before night. Mr. Alpaugh says it is important to keep the screen and pan perfectly clean, else the sediment will warm up next time and color the honey.

Shallow vs. Deep Extracting-Frames.—These were discust in a Texas convention reported in the Southland Queen. With shallow frames and bee-escapes bees can be got off the frames without handling each frame separately. A super of deep frames is too heavy to use the escape. Two shallow frames can be uncapt quicker than a Langstroth. Ten shallow frames are taken off in the super and put on again in less time than a single deep frame is taken out, brusht of bees and returned. With shallow frames, less trouble with bur-combs. Shallow frames are lighter to handle and don't need wiring. Shallow frames are not interchangeable in the brood-chamber; takes more time to make shallow frames for an apiary, and to put in foundation; you have twice as many frames to space, twice as many frames to handle, but shallow frames don't melt down so readily as deep ones.

Warming Honey Before Extracting.—Before taking the combs for extracting, John Newton goes around to the hives and places the entrance-blocks on, giving a few puffs of smoke. This causes excitement which warms up the honey, making it easier to extract. After the combs are taken from a hive for extracting, the entrance-blocks are removed. He objects to removing extracting-supers from hives to let bees leave of their own accord, as it cools the honey too much, making it sticky and stringy to extract.—Canadian Bee Journal.

Price of Honey in Canada.—Editor Holtermann says honey is higher on this side of the line, but it doesn't pay to ship across on account of duty and other charges. Montreal papers quote comb honey right along at 7 cents a section. In Toronto it is quoted higher, altho Montreal has the wider, and therefore the heavier, sections. He thinks the inferior quality of some of the honey thrown on the market has the effect to lower the price, dragging down the good with the bad. On this side of the line poor honey on the market has the opposite effect, according to Editor Abbott.

Why Hybrids Are Preferred.—Hon. R. L. Taylor, in the Bee-Keepers' Review, says bee-keepers do not keep hybrids because it is too much trouble to keep pure Italians, but because the hybrids are better bees. "They are as good honey-gatherers, they go readily into the comb-honey supers—no fussing with bait sections—combs and comb honey supers are freed from them very much more readily; and as to the color, handsome is that handsome does." If that is true, those who hold the theory that pure Italians are better are on pretty safe ground, for in most cases the attempt to keep pure Italians results in the best grade of Italians.

Large Hives.—C. P. Dadant continues in Gleanings his discussion in favor of large hives. He says it is a mistake to think you can calculate just how many cells a queen needs, and furnish that number feeling sure she will use all of them. She works with a good deal of regularity till she gets to the edge of the comb, when "she quite often loses considerable time in regaining the thread of her work." In hunting for cells she wastes time and drops eggs which are wasted when much needed. With a larger number of cells these eggs would be saved, and an incentive to swarming removed. With large hives, the few swarms that do issue are larger and more profitable. The man with a small hive is not able to tell how much room his queens would fill.

Hive-Making and Stimulative Feeding.—Critic Taylor, in the Bee-Keepers' Review, doesn't advise bee-keepers to make their own hives with hand-saw and chisel. "If one has no saw-table of his own he can easily get the use of one by going not far from home." In reply to the intimation from H. F. Moore, on page 596, that said Taylor is heretical for holding the view that stimulative feeding does not pay, said Moore flanking his assertion by the statement that he can rear colonies by stimulative feeding for less than $2.00 a colony, hives not included, Mr. Taylor thinks it would be safer for Mr. Moore to figure out his profits after he has sold his colonies, and thinks more money could be made making hives with a hand-saw.

Florida Bee-Shed.—John Craycraft is very enthusiastic over his bee-shed which he writes about in Gleanings. It is cheaply constructed, contains 112 hives, is octagonal, each side being 16½ feet on the outside. "The posts are 3x4 inches, and rest on pine blocks. All the other timbers are 1½x3, using this size for rafters, ties, and roof-strips to nail the boards on, which are of cypress, 5 feet long, making the shed about 8 feet wide, so that my hives will lean back about a foot, leaving a walk 3 feet wide, as my hives are all 16 inches square, outside. But for the Langstroth hive the shed should be rooft about 10 feet wide, so that the hives could be placed back under the shed about a foot, leaving about a 3-foot passage. For ease of handling, the entrance to hives should be at the side, so that the operator can work from the side instead of from the end of frames."

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Chicago Bee-Keeper's Association will hold its second quarterly meeting at 9 a.m. next Thursday, Dec. 1, 1898, at the Briggs House, northeast corner of Randolph St. and Fifth Ave. A fine program is being arranged by the Secretary, H. F. Moore. Dr. C. C. Miller and other leading bee-keepers are expected from outside this county. It is hoped that every bee-keeper in Cook county will be present, and help to make this new local organization of bee-keepers a great success.

◆

An Experience with Apis Dorsata.—In the British Bee Journal of recent date we find the following from Rev. T. J. L. Mayer, writing from Sheikbudin, Punjab, North India:

> "I have written for the last Government Blue Book on Indian bees. I think your chance with Apis dorsata is *nil*. I had seven colonies hived and fed all winter, and in the spring the little brutes decampt by 20 and 30 a day, until each queen, in turn, got disgusted and left the hive. Your only chance is with the hill bee, Ghalozi. No unicomb bees will ever be domesticated unless put into hives whose entrance-board is at the top, *i. e.*, under the eaves of our modern hives."

And yet there are those who want our Government to go to great expense to import Apis dorsata. Here is a man who had seven colonies of these bees in hives, and *all* of them left. It seems to us that bee-keepers in this country would better be satisfied with the Italian bees. Of course if our present bees can be improved by careful selection and breeding, so much the better. But we don't believe that our bee-keepers want a foreign bee that won't be content to remain in hives without being padlockt in, and the key hid somewhere.

"Pussy-Cat Style" of Criticism.—Editor Holtermann, of the Canadian Bee Journal, quotes this editorial paragraph from the Bee-Keepers' Review in reference to the style of criticism that some think obtains in the bee-papers:

> "Perhaps you have not noticed it, but our apicultural journalism has somewhat degenerated in the line of criticism. It has fallen into what Mr. Heddon calls the 'pussy-cat style.' Attempts at criticism are coucht in language so apologetic and 'mealy-moutht' as to nearly rob them of all force."

Whereupon Mr. Holtermann offers this sentence of endorsement:

> "By all means let us have done with the 'pussy-cat style' which too often means that one has not the pluck to say openly what one would say in secret."

Now, the only "pussy-cat style" of criticism that we think needs to be "done with" is the kind that resembles the scratching, spitting and yowling that one hears occasionally at night in some back alley where two or more "pussy-cats" seem to be having a dark but exciting convention. We have no use for that kind of "pussy-cat style," and the sooner it is "done with" the better for all concerned, not only in the back alley but also in any bee-paper, should the editor so far forget himself as to let such "pussy-cats" get started.

What is needed is criticism offered in a kindly, considerate Christian spirit. It should require no "pluck" to offer that kind, and it should be received in the same spirit as given.

Yes, sir, the "pussy-cat" or Tom-cat style ought to be "done with"—before it's begun.

◆

Descriptions of Hives.—A subscriber in Arizona suggests that we publish "a series of articles descriptive of each hive, with illustrations." Now, we like to receive suggestions, but when any one hints that we begin on the over 900 hives that have been patented in this country, we just feel like "throwing up the sponge."

Let us suggest to our good friend, and to others, just to send for the catalogs of all supply dealers that advertise in the bee-papers, and they will get the descriptions and illustrations of about all the hives that are of any value in this country.

◆

California Laws on Bees.—Mr. Geo. H. Stipp, of San Francisco Co., Calif., wrote us as follows in reference to the statutes relating to bees in that State:

> An inspection of the Index to the Laws of California, covering the period from 1853 to 1893, discloses the following named laws only, upon the statute books:
>
> Penalty for keeping bees in San Bernardino Co.—Stats. 1877-8, p. 563.
>
> Act for promotion of culture of bees.—Stats, 1883, p. 285.
>
> Inspectors of bees and duties.—Idem.
>
> I do not think any general laws have been past since 1893, but there may be numerous local ordinances of record in the county or counties to which pertaining.
>
> GEO. H. STIPP.

◆

Importance of the Exchange.—Prof. Cook, of California, who is in an excellent position to judge of the advantages offered by the exchange or co-operation idea among producers, writes us as follows on the subject:

> The Southern California Fruit Exchange is becoming more and more popular. Our producers on the farms and in the orchards are coming to see that "co-operation" is the motto of all successful business enterprise. The decline in farm values, and the absence of profits the last few years, might have been avoided, had farmers followed those of all other vocations—even down to the boot-blacks—and acted together.
>
> The Citrus Fruit Exchange has had a struggle. It had to fight the commission men in solid phalanx, and the ignorance, suspicion and short-sightedness in its own ranks. Of course, the Fruit Exchange has made some mistakes. Every new enterprise must do so; but it has saved the fruit industry of Southern California from collapse, has grown steadily in pop-

ularity, and has demonstrated beyond question that co-operation is possible among farmers.

This year the Fruit Exchange has made very substantial progress. There is no doubt but that successful co-operation among all classes of farmers is to come in the near future, and will do more for the prosperity of the country than almost any other one thing. It is good that California can be a light in this respect.

The Bee-Keepers' Exchange here has had but one year, practically, to show its hand. The past season has been so great a honey failure that no work or progress was possible. Last year it made good progress. In all such enterprises it is the main thing—an absolute necessity—to secure a manager who is true, honest, competent, and withal a hustler. I believe we have all of these in Mr. Clayton. It is one of the greatest importance that few or no mistakes be made in this matter. It means more than benefaction to Southern California. Pronounced success will convince other sections, and the entire country will be blest. Let us all help all we can.

A. J. Cook.

We are certainly in great sympathy with the objects and work of the California Bee-Keepers' Exchange, and hold the columns of the old American Bee Journal ever open to its help. We wish it success, and want to do all in our power to make it a winner.

Keep Honey Customers Supplied.—Many bee-keepers this year find that they have not produced enough honey to supply their home demand. And some will think it scarcely worth while to send off for honey and thus furnish their regular customers with it. Right there is where a mistake is made. By all means, get honey elsewhere, if possible, and sell it to your old customers. Of course, they may have to pay you a little more for it than in other years when you had a crop of your own, but they will not object to that, any more than they would object to paying a little more for flour when the price of wheat is higher.

Now, we would say the above even if we had no honey to sell; but we feel that we are doing bee-keepers a good turn when we buy their honey, and then offer to sell it again to other bee-keepers. It helps all around, and we trust that many more of our readers will avail themselves of the opportunity to get honey (as we offer on page 749), and keep their customers supplied all winter, or until another honey harvest comes. One of our readers gets several 60-pound cans every week, and is doing well with it. He puts it into gallon cans, and gets $1.75 a gallon for it in a city trade. But even at $1.50 a gallon it wouldn't be bad. Try it.

THE WEEKLY BUDGET

"Tell Me His Name Again" is the expressive title of a new missionary song—duet and chorus—the music of which was written by Mrs. Mary E Newlin—a sister of this editor. The words were written by Mrs. A. W. Gruber. It is a beautiful thing for any church missionary service. Send for it and sing it. A single copy is mailed for only 15 cents, two copies for 25 cents, or three or more for 10 cents each. Address, Mrs. Mary E. Newlin, Meadville, Pa.

Mr. and Mrs. Thos. Wm. Cowan's Great Loss.—Some two weeks ago we announced the sad news from the British Bee Journal of the loss by shipwreck of a daughter and son of Mr. and Mrs. Cowan. In a later number of that journal the junior editor, Mr. W. B. Carr, gives the following simple facts as they occurred regarding the senior editor's son and daughter on board the ill-fated steamer "Mohegan," which will be read with much interest by all bee-keepers on this side of the Atlantic:

Mr. and Mrs. Cowan had arranged to pay a lengthened visit—accompanied by their only two daughters and second son—to America, where their eldest son owns a fruit-farm, in which his father is much interested, at Loomis, Calif. The voyagers thus included all the members of Mr. Cowan's family except the youngest son, who is a pupil at the engineering works of the Great Northern Railway, Doncaster. Probably all would have travelled from Liverpool in the Etruria, but the two young people who were passengers on the "Mohegan," being fond of the sea, chose to take the longer voyage from London and meet their parents at Chicago, Mr. Cowan himself having arranged to pay a promist visit to some American and Canadian bee-keepers on his route to that city.

On Thursday, Oct. 13, he saw his children depart on board the "Mohegan" from the Tilbury dock in high spirits and full of happy anticipation of their next meeting at Chicago. It was his intention to join Mrs. Cowan at Doncaster on the following Saturday and spend the intervening few days there with their youngest son referred to above, the latter being the only member of the family thus left in England. But how true is it that "Man proposes but God disposes." Saturday brought news of the loss of the "Mohegan" off the coast of Cornwall, and the day was spent in anxious suspense by all who had relatives or friends on board. At 9:30 p.m. I received at my home a "wire" to say that Mr. Cowan and family had gone from Paddington to the scene of the wreck, and on Monday our worst fears were confirmed. I, of course, at once wrote to Mr. Cowan, but a note from himself crost mine, in which I learned that the worst had happened, but that he had recovered the bodies of his children, not bruised, as so many were, but placid, as if sleeping peacefully, and he was thankful. I pass over what immediately followed, except to say that they were buried on the 19th inst., at the little village church of Budock, close to the scene of the disaster, the family returning to town the same day.

I saw Mr. and Mrs. Cowan at Hampstead on Thursday and found them full of gratitude for the many letters expressing sympathy with them in their bereavement. Not a few have reacht this office conveying similar sentiments, and knowing how greatly Mr. Cowan regards the good wishes of bee-keepers, I ask them to accept, on his behalf, this acknowledgment of their kindness.

In conclusion, and as Mr. and Mrs. Cowan, with their only remaining daughter, are now on the Atlantic on their way to California, where they proceed direct from New York, I hope to be pardoned for quoting a few words from a note to myself, written by Mr. Cowan on board the "Etruria," after leaving Liverpool, and thus conclude. The extract reads thus:

> "I can hardly realize that so much has happened since last Saturday, and that everything has been so ordered as not to prevent our joining Alec. as soon as possible. When we think of how others are suffering who have not found their friends, or have found them mutilated, how thankful we are that ours were spared all suffering, and that we were able to recover their precious remains so soon. Now we are on the sea, but 'in the hollow of His Hand,' and trust in Him who doeth all things well."

The above words are more characteristic than any I could write of one for whom so many of us feel a love and esteem seldom given to a single individual in this world.

W. Broughton Carr.

Mr. A. W. Hart, of Stephenson Co., Ill., who called on us a few weeks ago, wrote as follows Nov. 3:

Friend York—The next morning after my return home my folks got me out at daylight, to take up, whip, clean and put down carpets, etc. "Well, now," I said, "this seems like falling from the sublime to the rediculous, after being in Chicago midst its beauty, grandeur and glory, and being piloted about its illuminated streets by a sweet lady escort, to now get down to the vulgar duties of a common house-cleaner, in the dust and dirt." O well—

Such things need come into one's life.
If he keeps house, and has a wife
With talent to be clean and neat
Herself, and home keep nice and sweet.

So will her "king," if she's his queen,
Be gallant still, nor be afraid
To be the court(i)er! he has been,
And, cheerful, lend ungrudging aid.

And every nook, with smiling face,
He'll cheerful meet with domestic grace;
If still "he worships her very tracks,"
He'll on his knees—and pull the tacks!

A. W. Hart.

We are glad to see that our 69-year-old friend is still a young H(e)art(ed) lover, and makes himself "useful as well as ornamental" around the house. But, then, that's a way most good bee-keepers have.

To Our Regular Subscribers—Now for New Readers!

6 Great 50-cent Offers—Each One Free!!

On this page you will find six splendid premium offers, and we will mail your choice of any one of them for sending us $1.00 for **just one New subscriber** for 1899—and we will throw in the last three months of this year's Bee Journal free besides to each new subscriber you send on these offers. That makes 15 months of the Bee Journal to the new subscriber. Or, for sending us **4 New subscribers,** as above, we will mail the sender all of the 6 great 50-cent offers.

JUST READ WHAT THEY ARE:

Offer No. 1.—Samantha at Saratoga.

100,000 Sold at $2.50 per copy.

This is indeed a feast of fun, by the only peer of Mark Twain's humor—JOSIAH ALLEN'S WIFE (Marietta Holley.)

Read this Extract from the Book:

And right here, let me insert this one word of wisdom for the special comfort of my sect, and yet it is one that may well be laid to heart by the more opposite one. If your pardner gets restless and oneasy and middlin' cross, as pardners will be anon or even oftener—start them off on a tower. A tower will in 9 cases out of 10 lift 'em out of their oneasiness, their restlessness and their crossness.

Why I have known a short tower to Slab City or Loontown act like a charm on my pardner, when crossness wuz in his mean and snappishness wuz present with him. I have known him to set off with the mean of a lion and come back with the liniment of a lamb.

And jest the prospect of a tower ahead is a great help to a woman in rulin' and keepin' a pardner straight. Somehow jest the thought of a tower sort of lifts him up in mind, and happifys him, and makes him easier to quell, and pardners must be quelled at times, else there would be no livin' with 'em.

She takes off FOLLIES, FLIRTATIONS, LOW-NECKED DRESSING, DUDES, PUG DOGS, TOBOGGANING, ETC.

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Nicely bound in paper, fully illustrated, printed from new type and on fine paper. 370 pages. Postpaid, 50 cents.

Offer No. 2.—New Waldorf Cook-Book.

Over 1,000 of the very best up-to-date recipes for every conceivable variety required in the kitchen and other departments of house-keeping, by **Mrs. Anne Clarke,** the distinguisht student and instructor in culinary science, assisted by many of the most successful house-keepers in various parts of Europe and America. It gives the latest and best methods for economy and luxury at home. Just the book for the housewife or daughter. Has had an enormous sale at $2.00 a copy. 380 pages; paper bound; postpaid, 50 cents.

Offer No. 3.—Cattle, Sheep and Swine Book.

Fully Illustrated—300,000 sold at $3.00 a copy.

This great work gives all the information concerning the various Breeds and their Characteristics, Breaking, Training, Sheltering, Buying, Selling, Profitable Use, and General Care; embracing all the Diseases to which they are subject—the Causes, How to Know and What to Do given in plain, simple language, but scientifically correct; and with Directions that are Easily Understood, Easily Applied, and Remedies that are within the Reach of the People; giving also the Most Approved and Humane Methods for the Care of Stock, the Prevention of Disease, and Restoration to Health. Written by Dr. Manning.

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Offer No. 4.—Gleason's Horse-Book.

By Prof. Oscar R. Gleason.

This is the only complete and authorized work by America's king of horse trainers, renowned throughout America and recognized by the United States Government as the most expert and successful horseman of the age. The whole work comprising History, Breeding, Training, Breaking, Buying, Feeding, Grooming, Shoeing, Doctoring, Telling Age, and General Care of the Horse. You will know all about a horse after you have read it. No one can fool you on the age of a horse when you have this book. 416 pages, bound in paper, with 173 striking illustrations produced under the direction of the United States Government Veterinary Surgeon. In this book Prof. Gleason has given to the world for the first time his most wonderful methods of training and treating horses. 100,000 sold at $3.00 each. Our price, postpaid, 50 cents.

Offer No. 5.—Music, $5 for 50 cents.

Four pieces New Sheet Music, which sell at music stores at 50 cents each—$2.00; Three years' membership in the World's Musical Association (regular price $1.00 a year), $3.00. Total, $5.00. We offer the whole thing at 50 cents.

The four new pieces of sheet music are the very latest hits of this year; are regular sheet music size and quality, but the title pages are a new style of art, viz: Illuminated Chromatic designs in five brilliant colors.

THE SONG TITLES ARE:

"Do Your Honey Do," by THEO. METZ, author of "A Hot time in the Old Town To-night." This latter piece, said to be his best, is creating a great stir, and becoming immensely popular everywhere.

"Queen of the Bicycle Girls," by the celebrated composer, OTTO LANGEY, by far the most charming Bicycle Song yet issued.

"Blossoms from Over the Sea," by the distinguisht composer, J. P. SKELLY, a very beautiful Sentimental Song.

"He's Just Like All the Men," by the renowned composer, EASTBURN. Wonderfully pleasing to the Ladies.

The World's Musical Association is an organization having special advantageous relations with the leading music publishers of this country and Europe, and being an enormous purchaser, it is enabled to supply to its members (and will do so) any music desired (at any time within the term of their membership), at such wholesale prices as are usually granted only to very large dealers.

Offer No. 6.—The Poultry-Keeper Illustrators.

The four "Poultry-Keeper Illustrators" are the greatest books on poultry subjects ever issued, and are a veritable poultry dictionary, covering the ground so completely that, having these four books, one needs scarcely anything more except "grit" to become a successful poultry-raiser. You cannot get such other books in the whole world, not even for $50 each, for they do not exist. Were they given in another form and elaborate binding and colored cuts you might think them easily worth $5 each, but what you want is not elegant printing, and in these we give you the value in information that you can make use of. They have cost much in labor and cash, but you get all this value for almost nothing. We mail the 4 Illustrators for 50 cents.

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Illustrator No. 2.—Artificial Incubation, Raising Chicks, Testing Eggs, etc., 25 cents.

Illustrator No. 3.—Poultry Diseases, Lice, Grapes, Moulting, Egg Eating, etc., 25 cents.

Illustrator No. 4.—Judging Fowls, Description of Breeds, Mating, etc., 25 cents.

These offers ought to bring us in at least 2,000 new readers during this month and next. You could send in your own renewal for 1899 at the same time you send in a new subscriber, if you wish. If you do, you can select any one of the above offers free for yourself, provided you send at least **two New subscribers** at the same time. That would give you your choice of **three** of the offers—by sending your own renewal for 1899, and two new subscribers ($3.00 in all).

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"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.
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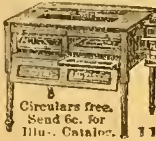

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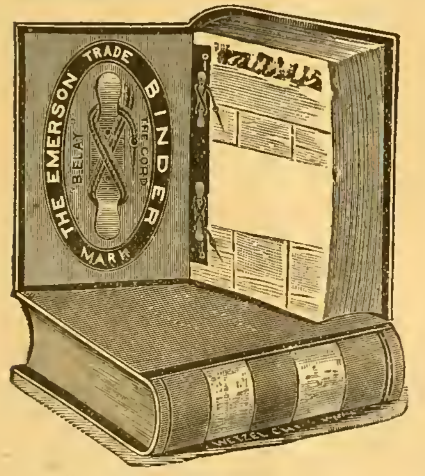

This Emerson stiff-cloth-board Binder for the American Bee Journal we mail for 60 cents; or will send it with the Journal for one year — both for $1.50. It is a very fine thing to preserve the copies of the Bee Journal as fast as they are received. If you have the "Emerson," no further binding is necessary.
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Cash for Beeswax. BELL BRANCH, MICH.
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GENERAL ITEMS

Member of Waterleaf Family.

I send a plant that I may learn the name thereof. It is the first or among the first things in bloom in this section, and bees seem very fond of it, remaining with it throughout the day. It grows along marshy lands, and along the foothills near them. Bees build up rapidly in early spring when located near it, so it must secrete nectar profusely. W. I. COPELAND, M. D.

Polk Co., Tenn., Nov. 3.

[The plant belongs to the order, Hydrophyllaceæ, or waterleaf family; species, Phacelia purchii. Its limits are Pennsylvania west to the Mississippi river, and south to Alabama. The flowering season is April to June. The order to which it belongs is small, but has merkt nectariferous properties, as some of the species (not this one) are provided with nectariferous grooves to facilitate the extraction of the juice by the bee.—EDITOR].

◆

The Langstroth Monument Fund.

EDITOR YORK:—I send two dollars, one of which is to renew my allegiance to the United States Bee-Keepers' Union, and the other to go into the fund for the erection of a monument to Mr. Langstroth.

It seems a little singular that after the great benefit that has accrued to the bee-keepers of this country through the ingenuity and perseverance of Mr. Langstroth, there should be so much apathy displayed by them in regard to this matter, and I am inclined to the belief that there are many hundreds of them, who, like myself, have been a little careless or negligent about it, but who, ever since the subject was first brought to their notice, have been intending to contribute their mite. There is an old saying, that what can be done at any time never gets done, but I hope there will be exceptions enough to this rule to provide a sufficient sum to erect a suitable monument to the memory of him who did so much for the bee-keepers of this country.

DAVID HALL.

Wyoming Co., N. Y., Nov. 2.

◆

Rather Discouraging Report.

Last fall I put 14 colonies of bees into the cellar, and with three swarms this summer made 17. Before taking out of the cellar, three colonies starved; two of the new swarms arose and bade me good-bye, thinking they could find a better country. Two colonies the moths took possession of, and the rest were robbed of honey, bees, and all by stronger colonies; and I now have four colonies left, three being good for the winter, and one must be fed to winter at all. You may lay some of it to me, but, as the boy said, "I am not guilty of it all." I took 60 pounds of honey, and the bees had the rest. There will be less bees in Minnesota next spring than there are now. My bees are blacks. The Italians get honey from red clover, and the blacks cannot.

J. V. B. HERRICK.

Hennepin Co., Minn., Nov. 15.

◆

A Very Dry Spell.

We are having a very dry spell, no rain having fallen for quite a while, and north winds have about dried up all the moisture there was in the ground. We had early rains and for a time everything lookt favorable for a fine season. The new grass soon grew sufficiently for the hills to be again deckt in verdure; but they are now almost as brown as they would be in July or August, when California is a dry country indeed. This is the time for seasonable rains; farmers and others rush their plowing at this season. Where grain has been sown and started it is getting a bad set-

Sweet Clover
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	5lb	10lb	25lb	50lb
Sweet Clover	.60	$1.00	$2.25	$4.00
Alsike Clover	.70	1.25	3.00	5.75
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Alfalfa Clover	.60	1.00	2.25	4.00
Crimson Clover	.55	.90	2.00	3.50

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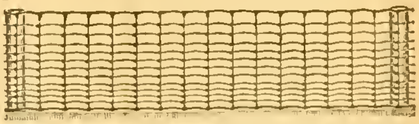

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COOK'S "BEE-KEEPERS' GUIDE" FOR ONLY FIFTY CENTS.

You ought to have a good bee-book, if you haven't one already. Prof. A. J. Cook's Manual, or "Bee-Keepers' Guide," is one of the very best publisht to-day. It is bound substantially and neatly in cloth, contains over 450 pages, and retails at $1.25 a copy, postpaid. But we are going to make you an offer, **for the next three weeks** (positively ending Dec. 10), **that will open your eyes.** Here it is:

☞ To every subscriber who before Dec. 10 will pay his subscription to the American Bee Journal to the end of next year (1899) we will mail a copy of Prof. Cook's "Bee-Keepers' Guide" for only 50 cents extra. That is really getting a dollar-and-a-quarter bee-book for only 50 cents. Can you afford to miss such a chance as that? Address,

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This is a good time to send in your Beeswax. We are paying **26 cents a pound — CASH —** upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

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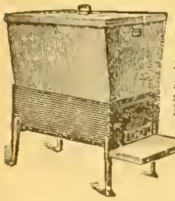

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that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

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back, so much so that in places it is dying out. If it continues, the price of butter, hay, grain and other rural products will advance very materially. Those apiarists who are holding on to their honey will be apt to get a good price. There seems to be no reason why extracted honey should not go up to 7 cents and over. Some bee-keepers are already getting an advanced price for their honey. Mr. J. H. Martin writes me from the northern part of the State that he obtained 6 cents for his honey. It was shipt to the San Francisco market. This is ahead of what honey brought last year by double.

You may judge how bad the outlook is for rain when I state that prayers are being offered up in the churches for seasonable rain. W. A. PRYAL.

Alameda Co., Calif., Nov. 14.

◆

Tin vs. Wood for Honey.

The editorial on page 712 gives only one side of this matter. I wax all my barrels with paraffine at an expense of 10 cents each or less. This prevents soaking of honey into the barrel, of which is given an extreme case, as also all danger of flavoring the honey with any wood flavor the barrel might give.

The objection to tin cans, with us at least, who live so far from the general market, is the extra cost. The greater expense of tin, as well as the extra freight on honey in cans over honey in barrels, is very nearly or quite one cent a pound; while the increast price we may obtain for it may be one-fourth cent a pound. The question with us down here is simply one of dollars and cents, and barrels seem to have a decided advantage.

O. O. POPPLETON.

Dade Co., Fla., Nov. 14.

◆

Very Good Season for Bees.

It has been a very good season here for bees this year. I got 1,600 pounds from my apiary, and have sold $180 worth of honey. I got 12 cents a pound at our station. I don't know whether that is as well as other bee-keepers have done with their honey, but as to market reports, I think it will average with them. I have 65 colonies of bees which are in good condition for winter. G. H. ADKINS.

Essex Co., N. Y., Nov. 14.

◆

Honey Crop a Failure.

The honey crop is a failure here, but some colonies that I moved to the moist sunflower lands have filled up and are in excellent condition for winter; and if I had known the benefit to be derived from moving I should certainly have moved all I had; and I think if they had been moved early I could have extracted at least once, and they would also have filled up so as to winter in good condition.

L. L. ANDREWS.

Riverside Co., Calif., Nov. 7.

◆

Does Chilling Injure a Queen?

Early in the past summer, I had a colony, started from a nucleus, which did not thrive, notwithstanding I had coaxt it by every means I knew, during the winter and spring. It had dwindled to a handful of bees, but as the queen was Italian and the producer of fine looking bees, I did not like to lose her, altho she seemed to be quite unprolific. I, therefore, placed in the hive several sheets of brood and adhering bees from a strong colony. Immediately there was a big battle. I concluded it would be best to look out for my queen and save her if possible, but could not find her anywhere. As she was clipt, she could not fly away, so I closed the hive reluctantly to await results.

Late in the afternoon, I went to the hive and there discovered my cherisht queen on the flat of her back on the ground and dead (?). I took her to the house to show my brother-in-law and, as he held her in his

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the kind that never stops growing a minute and which matures at an early age, is the kind that produces the greatest percentage of profit. This problem of quick maturity is solved by

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☞ We would suggest that those bee-keepers who did not produce any honey for their home demand the past season, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. The Circular, "HONEY AS FOOD," will be a great help in creating customers for honey. Address,

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warm palm, she slightly moved a leg. By blowing his breath upon her, she livened up and kickt some more. I told him to nurse her and see if she would not revive, while I went to prepare a cage. In a little time she was crawling all over his hand. I then put her in the cage, stopt up with candy, and placed her in the top of the hive. In a few days she was out and as contented as tho nothing had befallen her. She now has a large and growing family and plenty of brood.

This seems to combat the idea that chilling of the queen destroys or impairs her laying qualities. GEO. H. STIPP.

San Francisco Co., Calif., Nov. 10.

* * *

Very Poor Season.

Bees did very poorly here the past season. I have about 800 pounds of honey from 55 colonies. All seem to have plenty to carry them through the winter. We live in hopes for a better season next year.

WILLIAM M. DICK.

Ford Co., Ill., Nov. 10.

* * *

Bees Did Well.

Bees came through last winter better than ever before. I had 9 colonies, spring count, increast to 17, all strong with the exception of one. Some colonies stored 50 to 60 pounds of surplus honey; others very little. Take it throughout the county, bees have done very well.

My honey has been of first-class quality, and I had no trouble in selling it in the home market.

I use 8-frame dovetailed hives, but prefer the 10-frame, and will put my new swarms into them another year. WILL HOWE.

Saginaw Co., Mich., Nov. 10.

* * *

One of the Asters.

I send a sample of a flower that blooms here. It is a newcomer, first making its appearance three years ago. It is a great bloomer, beginning about Sept. 25, and continues to bloom up to about Oct. 25. Some will bloom later. Some of it is in bloom here now, but I speak of the full or general blooming period. Our hives filled right up when it was in bloom, and if it had not been for it we would have had to feed considerable. This has been a very poor honey season here, up to the time of the bloom of the flower I send you—a regular honey-drouth. FRANK P. COOK.

Wetzel Co., W. Va., Nov. 4.

[The flower belongs to the Composite family; species, aster ericoides; variety, villosus. All the asters seem to have a fine record as nectar-yielders.—EDITOR.]

* * *

No Surplus—Queens and Premiums.

We had a fine crop of white clover, also a fine crop of alsike, but not a pound of surplus honey did we get. This fall we had a good crop of yellow flowers called Spanish-needle, but were not that; also a large crop of smartweed, yet not one pound of honey for me. The most of the colonies have enough to winter on, but there are a few weak ones that I will have to feed. The Ruler of the universe withheld the nectar from the flowers, so then of course the bees could not get it. My bees workt hard, and it seemed to make them angry because they could not get the honey; they were crosser at one time than I ever saw them before, but they have given it up now as a bad job, and concluded that it was not worth while to make a fuss about it.

I saw in the Bee Journal that Mr. Grabbe has suggested some good ideas in not offering premiums on Albino, Cyprian and Holy Land bees. I think very few people are breeding them in this country, and I don't know whether the Carniolans are any better.

I sent this season to a Texas queen-breeder for two queens, one golden Italian and one Carniolan. The golden Italian I wanted to change my stock, so as not to

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11.	Rational Bee-Keeping [Paper bound]	1.75
13.	Bee-Keeping for Profit	1.15
14.	Convention Hand-Book	1.15
15.	Poultry for Market and Profit	1.10
17.	Capons and Caponizing	1.10
18.	Our Poultry Doctor	1.10
19.	Green's Four Books	1.15
21.	Garden and Orchard	1.15
23.	Rural Life	1.10
25.	Commercial Calculator, No. 1	1.25
26.	Commercial Calculator, No. 2	1.40
27.	Kendall's Horse-Book	1.10
30.	Potato Culture	1.20
32.	Hand-Book of Health	1.10
34.	Maple Sugar and the Sugar Bush	1.20
35.	Silo and Silage	1.10
36.	Winter Problem in Bee-Keeping	1.30
37.	Apiary Register (for 50 colonies)	1.75
38.	Apiary Register (for 100 colonies)	2.00

breed in and in, not that I expected to get any better or yellow bees, but to change or improve the stock. The Carniolan I thought I might take to the State Fair, but not so. The golden queen bred poor 3-banded bees; the so-called Carniolan breeds bees just like 3-quarter blacks; a good many have one yellow band, the rest none.

I had two queens that were wrongly mated the past season, and their offspring were very much like the so-called Carniolan, the only difference being that my queens bred more yellow-banded bees than the Texas one did, but the bees that had no yellow on them had just as white rings as the others.

I had a queen from Texas a few years ago that bred as fine bees as one generally sees, but it was from a different breeder. I will not name any breeder, but if the one that I got the two queens from the past season sends out such queens for purely-mated queens, he surely will kill his reputation, if he has any. The guilty conscience needs no accuser.

I was not at the State Fair this fall, as my wife is in poor health, and it did not suit for me to leave home very well; and the premiums offered on bees and queens did not please me. It required too many kinds of bees and queens; I don't care to keep all these varieties of bees, and to send off and get them to make a display, it would cost more than it would amount to. I hope there will be some change between now and next season.

THOMAS S. WALLACE.

Adams Co., Ill., Oct. 17.

Ridding the Apiary of Ants.

I think I have solved successfully the problem of getting rid of ants in the apiary and here it is:

Shake a goodly supply of air-slackt lime around the hives, only, of course, keep it off the alighting-board, and if ants are under the cover, or in the supers, lift the cover and sprinkle along the edge of the super, inside. Of course, if it should rain the following night, the lime will harden and do no good, and you would have to apply again as soon as dry, for it is by the crawling through the fine, dry lime that the ants so much dislike. This will keep the yard sweet and free from bugs and ants, and costs but a trifle.

My bees did fairly well the past summer, producing about 70 pounds of comb honey a colony, spring count. J. H. TICHENOR.

Crawford Co., Wis., Oct. 29.

Honey-Dew.

Much has been publisht of late on this subject, and while no one praises it as being first-class honey, some think it from fair to middling, while others say it is worthless, or nearly so. But this depends on its source of production; with us it is produced almost entirely by the Aphidæ family. When it is secreted by the white or green aphis a certain percent of it will pass, but when it is produced by the yellow, brown, or black aphis the most of it is practically worthless. I have been accused of calling this stuff "bug-juice;" it is known by that name here.

It is claimed by some that it falls as a real dew; this is a mistake. One person recently wrote that he found it on the poplar leaves, but said there were no insects on them at the time; but he did not tell us that they never had been on them. The eggs are often laid on the leaf or stem. After they hatch, the small insect crawls over the leaf, sucking the sap from it and leaving a sticky substance in its trail. In some varieties, if examined by a microscope, nearly the entire body looks like small particles of honey, or honey-dew.

I enclose samples of the green and brown aphis on the apple and poplar; also sample of a dark variety on the willow leaf; they are alive now, but they may not be when received. I send also samples of suctorial insects—the woolly aphis and scale. They work on the bark, and are injurious to the life of the tree. These insects and the

coddling-moth have caused much loss to bee-keepers through the useless practice of spraying trees, vines, etc., while in bloom. Sometimes the secretions of these insects will partly dry on the leaves; then if there is a light, drizzling rain or a heavy dew, it becomes softened. In any case there can be no such thing as a real honey-dew. We can account for storms of ashes, dust, salt, etc., because they are taken up and again deposited by natural cause. Could it be possible for such a thing as real honey-dew falling? Would it not be like the other storms referred to—cover other space or surface as well as leaves? So far, we have not been troubled with this honey-dew question here, as far as the bees are concerned. I investigated the insect question to some extent while the blossom-spraying excitement continued, and, like other things, it is simple when known or understood.
E. S. LOVESY.
Salt Lake Co., Utah, Nov. 4.

Transferring—Getting Bees in Supers.

I had a little experience in transferring, this year, that pleased me some. I purchast a few colonies this season that were in hives that had very crooked combs. I simply put under them hives with frames and starters, and in about six weeks found them moved down below on nice combs, with plenty of brood, and the top story full of honey. I then put a Porter escape under the top story, and a day or two after I took it off, and put the combs into the solar extractor, and had my bees in a new hive on nice combs. Whether this plan will work at all times or not I do not know, but so far it has workt all right with me.

I had some trouble the past season with swarms not working in the supers, and I separated the brood-chambers (I use the Heddon hive with two brood-chambers) and put another in between (tiered them, rather) with frames and starters: they then went to work in the brood-chamber with the frames and starters in, and filled the upper story with honey, and I workt them for extracted and they did very well for this poor year.
W. W. WHIPPLE.
Arapahoe Co., Colo.

New York.—The tenth annual meeting of the Ontario Co., N. Y., Bee-Keepers' Association will be held in Canandaigua, N. Y., Dec. 8 and 9, 1898. An interesting program is in course of preparation. All interested in bees or bee-keeping are invited to attend.
Bellona, N. Y. RUTH E. TAYLOR, Sec.

Colorado.—The Colorado State Bee Keepers' Association will hold their annual convention Nov. 30 and Dec. 1 and 2, 1898, in the State Capitol Building, Denver. The Horticulturists meet Nov. 28, 29 and 30, our first day being their last. This arrangement will give members of both a chance to attend the other's meeting and discuss common interests. R. C. AIKIN, Pres., Loveland, Col.
F. RAUCHFUSS, Sec., Elyria, Col.

Ontario.—The annual meeting of the Ontario Bee-Keepers' Association will be held in Guelph, Dec. 6, 7 and 8, 1898. Owing to the Guelph Fat Stock Show, the Guelph Poultry and Pet Stock Show, and the Experimental Union meeting on the same dates, there will be a large meeting of bee-keepers, and each association will be a help to the other, as many are interested in all the different meetings. All are cordially invited to attend the meetings. W. COUSE, Sec.
Streetsville, Ont.

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12.	Bienen-Kultur, by Newman	40c

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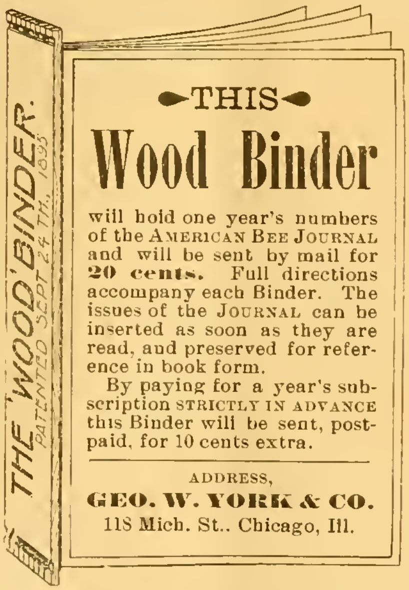

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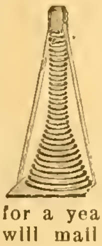
Commencing Sunday, Nov. 13, the New York and Boston Express will leave Chicago daily at 10:20 a.m., instead of 10:35 a.m., as formerly. Other trains will leave daily at 2:55 p.m. and 10:15 p.m., as heretofore. The same high standard of through train service and excellent equipment will be maintained, as in the past. No extra fares will be charged on any train. Rates always the lowest. Sleeping-car space may be received for any future date. Chicago Passenger Station, Van Buren St. and Pacific Ave., on the Loop. City ticket office, 111 Adams St. Telephone Main 3389. (47-1-76)



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Chicago, Nov. 19.—Our market is very strong at 13c for best grades of white comb honey, with good No. 1 at 11 to 12c; ambers range from 8 to 11c, according to appearance, quality and flavor. Extracted, white, 6 to 7c; amber, 5 to 6c; dark, 5c. Beeswax, 27c. All grades and kinds of honey are salable at this time R. A. BURNETT & CO.

San Francisco, Nov. 2.—White comb, 9½ to 10½c; amber, 7½ to 9c. Extracted, white, 7 to 7¼c.; light amber, 6¼ to 6½c. Beeswax, 24@27c

There is so little extracted now offering that it is hardly quotable in a wholesale way. Comb is in fair supply and is being very steadily held, altho with the demand for same almost wholly local, the movement is not very rapid.

St. Louis, Sept. 9.—Fancy white comb, 12 to 12½c.; A No. 1 white, 10 to 11c; No. 1 white, 9 to 10c.; dark and partially filled from 5 to 8c, as to quality. Extracted in cases, No. 1 white, 6 to 6½c; No. 2, 5½c; amber, 5c; in barrels, No. 1 white, 5½c; amber, 4½ to 5c; dark, 4 to 4½c. Choice Beeswax, prime, 24c; choice, 24½c. At present there is a good demand for honey. WESTCOTT COM. CO.

Kansas City, Sept. 9.—Fancy white comb, 12@13c; No. 1, 11@12c; amber, 10@11c. Extracted, white, 5½@6c; amber, 5@5½c; dark, 4½@5c. Beeswax, 22@25c.

The receipts of comb honey are larger.
C. C. CLEMONS & CO.

Boston, Sept. 30.—Our honey market shows a decided firmer tone since our last. A few sales have been made at 15c for an extra fancy lot, while almost all sales ranging from A No. 1 to fancy now are made at 14c, while occasionally, something a little off, will bring as low as 12½ to 13c. We do not look to see any lower prices.

Extracted, Florida, in barrels, mostly 6c to 7c, with a good demand. Beeswax, slow sale at 26c for best. BLAKE, SCOTT & LEE.

Indianapolis, Oct. 3.—Fancy white comb honey, 12 to 12½c; No 1, 10 to 11c. Demand fairly good. Tar-colored comb honey, 8 to 9c, with almost no demand. Clover and basswood extracted honey, 6½ to 7c. Beeswax, 25 to 27c,
WALTER S. POUDER.

Milwaukee, Oct. 18.—Fancy 1 pounds, 12½ to 13c; A No. 1, 12 to 12½c; No 1, 11 to 12c; No. 2, 10 to 10½; mixt, amber and dark, 8 to 9c. Extracted, white, in barrels, kegs and pails, 6½ to 7c; dark, 5 to 5½c. Beeswax, 26 to 27c.

This market is in good condition for the best grades of honey, either comb or extracted. The receipts of the new crop are very fair, and some of very nice quality. The demand has been and continues to be very good, and values are firm on fancy grades and straight, uniform packing. A. V. BISHOP & CO.

Columbus, O., Nov. 18.—Market somewhat easier. Quote: Fancy, 14c; No. 1, 12c; No. 2, 10c; amber, 9c; buckwheat, 8c.
COLUMBUS COM. AND STORAGE CO.

New York, Oct. 22.—Receipts of comb honey are large, and there is quite a stock now on the market. While white is in good demand, buckwheat and mixt seem to be somewhat neglected, and quotation prices have to be shaded in order to sell in quantity lots: We quote:

Fancy white, 13 to 14c; No. 1 white, 11 to 12c; amber, 10c; mixt and buckwheat, 8 to 9c. Stocks of extracted are light of all kinds. Demand is good at following prices: White, 6 to 6½c; amber, 5½c; dark, 5c. Southern, in half barrels and barrels at from 55c to 60c a gallon. Beeswax dull at 26c.
HILDRETH BROS. & SEGELKEN.

Detroit, Oct. 20.—Honey in better demand and better prices as follows: Fancy white, 13@14c; No. 1, 12@13c; fancy dark and amber, 10@11c. Extracted, white, 6@7c: dark, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

Minneapolis, Oct. 20.—Fancy white clover comb is now selling at 11@12c.; amber, 10½c. Extracted fancy white clover, 5½c.; amber, 4¾@5c. Dark grades, both comb and extracted, not wanted at low prices.
S. H. HALL & CO.

Buffalo, Nov. 11.—Strictly fancy honey is very scarce and held at 13c; occasionally 14c; but it must be perfect goods; fair to good white, 11 to 12c; if much soiled, 9 to 10c; dark grades, 7 to 8c. Trade is good for all qualities and no large stocks in market. Extracted, 5 to 6c. Beeswax, 24 to 28c.
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38th Year. CHICAGO, ILL., DECEMBER 1, 1898. No. 48.

CONVENTION PROCEEDINGS

UNITED STATES BEE-KEEPERS' UNION.

Report of the 29th Annual Convention Held at Omaha, Nebr., Sept. 13-15, 1898.

DR. A. B. MASON, SEC.

SECOND DAY—AFTERNOON SESSION.

[Continued from page 741.]

The afternoon session was called to order by Pres. York, and was opened by singing.

The following was written by Mr. S. A. Niver, of Tompkins Co., N. Y., and read to the convention by the Secretary in Mr. Niver's absence, entitled,

Experiences and Suggestions in Marketing Honey

After the honey harvest is over, we look proudly at the piles of nice white cases with such beautiful, clean looking combs shining through the glass, and realize that all that care and skill can do to make it attractive has been done, we come face to face with that momentous question—What shall we do with it? The old, time-honored method of bundling the whole crop off to some city commission house, selected by guess usually, to get returns for it perhaps, sometime, has proved so unsatisfactory that we have all been working at this vexing problem which has not kept pace with other improvements in apiculture.

Eliminating unnecessary charges and expenses, getting closer to the consumer, trying to educate the public to the knowledge of the beauties, healthfulness and desirabilty of honey as a food, and a medicine; airing the subject in bee-journals, even forming exchanges, and talking of combinations, trusts, or what not; some good has come of this agitation, doubtless, but the principal point imprest on my mind by the greater part of the sage counsels of the experts is—get your honey in nicer shape than the other fellow, and you can sell yours, and its none of your business what he does with his. This method is strictly in accord with the Golden Rule (Chicago edition)—"Do others or they'll *do* you." But that other fellow *cuts the price*, and in these hard times the *price* is of more importance to the consumer than polish. The result is a constant strife to outshine your neighbor, and a more pronounced vacuum in the wallet, as well as a more exacting market.

"Competition is the life of trade," and death of profits. Right here it might not be too badly out of order to quote some crumbs of concentrated wisdom from the ready pen of our General Manager, Mr. Secor:

"There was a time in the history of mankind when the individual seemed to be the more potent factor in society and business than at present, but the world is older than it was, almost everything is done differently from what it used to be. Business methods have so improved that a dollar goes farther in transacting the world's business than it did in the olden time. This has been brought about through organization and combination. A great many individual dollars brought together through associated effort, may be made to produce effects which never could have been brought about by the same individuals acting each for himself independently. Men interested in a common purpose are enabled to unite on a common plan of action, and work to some effect."

That would seem to point to a combination of bee-keepers, to make the most possible out of their product, to do business at the minimum expense, and maximum profit—but few believe it possible for so large a body to hang together, and so all stumble along in the same old rut.

My first experience as a honey-salesman was pleasant enough, for I had an extra fancy crop to sell, and it was before sand-papering sections was fashionable. To set a white, clean sample beside a grimy, travel-stained one, was just fun.

One dealer in Scranton had a very large stock of comb honey conspicuously displayed, which made me doubt my ability to make a sale there. He came out of his office with the usual eye to business, and I remarkt, "You seem to be loaded for bear in the honey line. Sorry I did not get here earlier in the season, but just take a look at my samples, and perhaps you will wait for me next year."

H. E. Hill, Editor American Bee-Keeper—See page 755.

With this I laid a sample of "fancy white" before him. He pickt it up, held it to the light, turned to me with a curious look and said, "Great Scott! how did you make that?"

It was his first sight of a "strictly fancy" section of honey, and the price was away above what he was accustomed to, but I wrote his order for 25 cases, 35 sections to the case.

On that trip a drug drummer showed me around the city (he was my cousin), and wanted to trade jobs with me, as he had to bore them to buy drugs, while they tumbled over their collars to buy honey.

It's different now. Last season I went into Johnson's, at Easton, Pa. (he is one of my old reliable customers), and found a case of "fancy white" which was just a little better than I could show. Basswood was a failure, and my best was only Alsike clover. He informed me that it was brought to his door for 8 cents a pound. That was like a jab in my solar plexus. I askt him faintly how much he had like that. Only one case—it was so *cheap*, he said, that we was afraid of it.

"Well, Johnson," said I, "have you any ice?"

"Of course I have," said he; "but what do you want of ice?"

"To put on your head, my dear man," I replied. "You are in danger of going crazy, to let a man get away with any honey like that at 8 cents per pound." And I trotted out quotations from New York and Philadelphia, at 13½ to 14 for such goods. "But," I continued, "you can't expect that man to find all your neighbors in a trance as you were, and you will not get another chance to buy from him, so you might as well give me your order"—which he did.

The season's reports say that the honey crop is a small one, but I expect to hear hard times and low prices just the same.

Every year finds fewer people with money to buy luxuries, and newspaper prosperity doesn't count in actual transactions. My idea of the best way to market our honey in this locality is to combine several crops, send our salesman to the grocery trade direct, take the orders from samples, giving time the same as is common custom with wholesale dealers, and make the second trip, when the time has expired, to collect the bills and take more orders. The expenses are proportionally less as amount of sales are increast.

I prefer to sell comb honey by count instead of weight, but that method requires careful, uniform grading and packing. The grocer nearly always sells by count, and it saves him time and annoyance to buy as he sells. To pack good and poor togther in the same crate under the plea that it is worth as much per pound, if it is only of the same quality and color, regardless of finish (by which I mean full sections, well sealed), leaves half a dozen culls on the dealer's hands unsold, and his entire profit is in that same half dozen. If your crate is markt "fancy," let every section be up to that grade, and also No. 1 the same way. I begin to think that selling "culls" at all is bad practice. They are worth more to extract and use as bait sections next year; and it demoralizes some markets so that only cull prices go for any grade.

Is it too much to hope that the wisdom and experience of this convention of the United States Bee-Keepers' Union will point out some better method of selling our honey than to glut the market of a few large cities that fix the general quotations which govern nearly all prices everywhere?

S. A. NIVER.

As the foregoing and following papers were on nearly the same subject, discussion of Mr. Niver's was deferred till after reading by the Secretary of the next paper, by Herman F. Moore, of Cook Co., Ill., as follows:

Best Methods of Developing and Maintaining a Market for Honey.

On taking a second look at my subject, I confess my inability to fill the sum of its demand. Who can say what is the *best* method? The one that brings a fair degree of success in my hands may utterly fail with my neighbor's customers and conditions. So I will amend the title to "some of the methods I have tried and found good." I think all the good ideas on this subject as printed could not be contained in a volume the size of the "A B C of Bee-Culture." The territory is so various, the conditions are so different, that it is impossible in a short article, such as this must of necessity be, to even touch upon all the points of interest to the producer of honey who is seeking a market.

The first thing necessary to develop a market is to have good honey. You will never develop a market for honey that will amount to much if you supply your customers with buckwheat, or sweet clover, or any of the other three or four kinds of honey that have been tried and found wanting as far as family consumption goes.

Let me say right here, that I am only considering this subject from the standpoint of the producer selling direct to the consumer, the consumer being the person buying honey for use on his own table. That very many things can be said, interesting and instructive, on marketing honey in other ways, there is no doubt, but I am convinced that the solution of the question of low prices for your honey lies most in the direction of selling more honey to families in your immediate vicinity, and thereby keeping vast amounts of honey from the city markets, and preventing them from being glutted with honey at any time.

The great business centers fix the price for all your products, and if you send them 1,000 pounds of honey where there is a market for 500 pounds, the price must suffer accordingly, and the price that honey brings there, 1,000 miles away from your home, tends to fix the price you can get even at home.

Without further argument we will conclude that one of the best ways to develop a market, is to develop a home market.

If you will take a little time and examine the business methods of successful men and firms, you will find that nearly every trade and profession depends upon personal influence and confidence. Many a man who travels for the great business houses is worth to them another $3,000 a year above an ordinary salary, because of his personal acquaintance with a long line of customers, and their confidence in his fairness and judgment.

The first thing to do is to get acquainted with your prospective trade. You can't do much business until they know you personally, and have confidence in you as a man. To this end you must use cards and circulars freely, and see and talk personally with every one on your route.

I need not advocate here the necessity of fair dealing in every particular with everybody. This is axiomatic. You will never get far unless you are "all wool and a yard wide," and your goods are the same.

In your calls always have samples of your honey, and give every one a chance to taste it. Once my brother sent me a shipment carelessly, and a fourth of it was smasht (comb); I put it on a plate, and took a silver knife with me, and little slips of white paper for plates, and gave everybody a taste of comb honey—my, how it did sell! I believe it will pay you to take a section and cut it, in your family trade, and give the ladies a chance to eat a piece one-fourth inch square. Of course, you must charge retail prices to your family trade, and only offer it in case lots (12 pounds), and you must work hardest in the part of your territory where you can get the biggest price.

You can ordinarily get as much in small case lots to a family as the grocer gets for one-pound at a time. You may wonder why; I will tell you.

Nearly all householders are anxious to buy their supplies as fresh as possible from first hands—from the producer. This gives you an immense advantage over the ordinary dealer. People expect only ordinary stuff from a dealer, as he sells so many different things, and sells *at them* until they are all gone, if it takes a year. With the farmer it is different. He sells his potatoes right from the ground, his honey right from the hive.

As to price, the family ordinarily does not pay much attention to price. They want something good as gold, and are willing to pay well for it.

In writing your circular, it will be of advantage to give a short history of your family as bee-keepers, location and size of apiary, largest crop of honey in one season, queens sent to remote parts of the world, if a queen-breeder; and perhaps a general invitation to call at your home and see your bees, and how you take the honey away from them.

In distributing your printed matter, I think all general distribution is loss of material. I only give circulars and cards along with conversation, and when making calls on individuals, and to parties where I have addrest them on the general or special subjects. As to this you must decide by your own special circumstances and conditions. There are without doubt millions of circulars that are too promiscuously distributed and are a total loss to the one who pays for them.

When you say to a gentleman,, "Are you fond of honey at your house?" he answers "No," being perhaps busy at the time, or just thinking "here is another peddler;" now leave him one of your circulars, illustrated perhaps with a honey-extractor, a queen-bee, or what not, and when you are gone he will read it, and next time you call you often have a customer even tho months may intervene.

So I will sum up the first part by saying, get personally acquainted, if possible, with every person in your territory. Insist upon everybody tasting your samples. Tell them about your bees, and yourself as related to the bees. Sell them good honey first, last and all the time. Get the highest retail price in your locality. Give them full weight, full measure, and use no deception of any kind at any time or place. Treat every one as you would treat your brother, or you would wish any one to treat you. Remember that developing a market for honey is a lifetime study, a lifetime work.

If you want some easy, pleasant work for six months, or a year or two, try politics, but stay out of the bee-business.

As to maintaining a market after it is developt, I hardly know what to add to the above. I will say, however, continue to do the same for 20 years, and after that, if you are spared so long, for 20 years more.

You will find some familes will tire of honey. To replace their loss, try constantly to get new customers. Try by every means in your power to keep all you get, and get more all the time.

My only fear is that the hearers will say, "It's just as if we had askt him how to succeed and he should answer, "Why, the way to succeed, of course, is to succeed." And it's true; you must depend upon your own grit, and push, and originality. Think up new ways of reaching the people. Get out of the old ruts. Follow these lines if its takes all summer, and you *will succeed.* HERMAN F. MOORE.

Herman F. Moore.

Dr. Miller—I think that is one of the subjects which we cannot very profitably discuss here. I think we can get as much from those who have written the papers, and who have had experience, as from those who are here.

Dr. Mason—I would like to say I think Mr. Moore knows what he is talking about. Several years ago he workt in Toledo selling honey, and he knows just how to do it, and he doesn't injure any bee-keeper who lives in the locality where he works, either; in fact, I believe he helpt me every time he came.

Letters were then read to the convention from Messrs. R. F. Holtermann, E. S. Lovesy, William Stolley, M. B. Holmes, and others, regretting their inability to be present, and sending greetings and good wishes.

Secretary Mason then read a paper written by Editor H. E. Hill, of the American Bee-Keeper, on

Migratory Bee-Keeping.

I am a firm believer in the philosophy of Mr. Newman, who, with reference to convention papers, once said: "Small sticks will kindle a fire, but large ones will put it out." It is therefore unfortunate that our Secretary should have allotted to me a subject of such limitless proportions; and I earnestly hope he will not shun his obvious duty to assume full responsibility for whatever degree of disappointment that may be occasioned by the presentation of this feature of the program.

Perhaps no subject could have been chosen affording greater scope for elaborate discussion, or capable of more diversified application. If we should follow, in his preparatory rounds, the bee-keeper of our arid Southwest, who, after the bloom of the valley has been blighted by scorching desert-winds, seeks to gain another flow at greater altitude in the mountains; should we fall in with a French bee-caravan, in its nocturnal march to the fields and gardens of the peasants; go with our Scottish friends in their annual tours to the heather with bees; review the experience of Perrine, Baldridge, Flanagan, *et al*, on the Mississippi, and include the floating apiaries of the Egyptians, by means of which it was sought to take advantage of the successive development of the flora in the valley of the Nile, more than 2,000 years ago, I fear the "fire" would be extinguisht.

The title of our subject savors somewhat of romance and adventure, but there is also a very practical side, as many who have engaged in migratory bee-keeping stand ready, and qualified, to attest. It is this practical side in which we are more particularly interested; for of all the benign attributes of our cherisht vocation—the beloved pursuit of bee-keeping—the dollar which may accrue is not the least fascinating to the specialist; if, indeed, it is to any, whether engaged in bee-culture for profit or pleasure.

As has been demonstrated by innumerable instances, bees may be transported with profit, under favorable conditions, to distant pastures; yet I believe heavy expense in moving for a special flow which is anticipated, is rarely warranted, and many cases might be cited to the discouragement of the practice. The advisability of the procedure in each case can better be determined by the apiarist in charge, whose portion it will be to abide the result. The uncertainty of nectar-secretion, even when an abundance of bloom is assured, renders the undertaking more or less hazardous, and especially so when the supply is anticipated from a variable and uncertain source; as, for example, the linden. With the mangrove of the South it is less uncertain, and in favorable seasons the flow is equal in extent to that of the linden under like conditions; hence, with the advantage of natural water-ways to facilitate moving, and where the apiary equipment includes a commodious transport, and where, as a result of earlier activity, a powerful force of workers has accumulated, which, by enforced idleness, through lack of forage, become consumers instead of producers of honey, all of which tend to lessen the possibility of loss and reduce the chances of failure, there is a strong incentive to action.

Impelled by visions of blooming fields known to exist 50, 100 or 200 miles up the coast, and a realization of the possible achievements of such an adequate force of workers, a move determined upon is very hopefully or confidently undertaken; and in many instances the results have justified the effort; occasionally the bee-keeper is handsomely rewarded for his enterprise. In the history of American bee-keeping, as chronicled in our journals, instances of such successful migration are now on record, to the credit of enterprising apiarists in their operations of 1898.

The minor details, with regard to the preparation for moving and handling the product need not be reiterated further. The importance of ample ventilation, pure air, restricted draft, water supply, subdued light, secure confinement, space for the cluster, careful handling, etc., is well known to every one competent to undertake the management of any apiary, whether permanent or portable. It might be well, however, to consider briefly the objects of migration and the conditions which determine its success or failure: First of the important requisites to success, is a thorough knowledge, not of the care and management of bees, alone, but of our fields of operation as well. With these, irrational moves, incurring heavy expense, will not be made; and with them, opportunities are occasionally offered to materially increase our product. Failure, to be sure, may, and sometimes will, through causes over which the apiarist has no control, meet the best of plans. But of what business enterprise may not the same be said?

From personal observation in various parts of the country, I recall but one place the advantages of which I regard as sufficient to warrant the expense which the undertaking involves; and while a continued practical test might disprove my faith in this field and its possibilities, I beg permission briefly to cite the circumstances and conditions upon which it is founded:

Permanently establisht in a certain locality of the South are apiaries which, for nearly a score of years prior to the freezes of 1894–95, have yielded annually (with but one or two exceptions) an average per colony of not less than 135 pounds of honey. Here the flow comes in May, June, and July. Distant 150 miles, and connected by navigable waterways, good crops are usually harvested each year during the winter and spring months. Other localities, as easily accessible, not infrequently give a surplus flow through September and October.

If these "stationary" apiaries are a source of profit to their owners, as they evidently are, why may they not be made doubly so through the utilization of such natural advantages?

When, through the great primary cause, innate love of our pursuit, which has inspired its true followers in their noble work of founding the United States Bee-Keepers' Union

—a union that is obviously destined to become the greatest and most powerful organization of bee-keepers on earth—and when through its influence bee-keeping shall have been lifted to its rightful place among the industries of the nation; when our product has become a staple household commodity, and bee-keeping knowledge and methods are brought correspondingly to a higher state of perfection, these opportunities and neglected advantages will be embraced, and, under keen competition, migratory bee-keeping pursued with systematic diligence. H. E. HILL.

Dr. Mason—In remitting his annual dues, Mr. L. L. Andrews, of California, wrote something about the subject of migratory bee-keeping, which I suppose can go into the report without being read here. [The letter is as follows:—ED.]

Migratory Bee-Keeping in California.

I am located in the foothills of Riverside county, and am very well situated when we have plenty of rain, but in a season like the present, one is compelled to choose among feeding, moving, or losing his bees. I chose moving, altho a distance of from two to six miles to the sunflower and mustard fields.

There is a great deal of wind here in the summer season, that is very detrimental to the bees working later than 10 o'clock in the direction they would have to go to get to the flowers this year. My mountain range is mostly covered with annual flowers, filaree, black sage, dodder or love-vine, white sage, holly, and sumac, in about the order named, all of which were almost a total failure this season. The range I moved to is level, moist land, both pasture and agricultural.

The pasture land produces some flowers, but the cultivated land, as soon as the crops are off, grows up to sunflowers and mustard, besides there is considerable corn, sorghum and alfalfa grown.

When I decided to move I chose 50 of my weakest and lightest colonies, as it was mostly an experiment, and I was afraid to even them up with my stronger and more weighty ones, fearing I might be compelled to feed or lose them all.

I moved them about the middle of June, two months later than I should do another time. Those I left on the old stands had the supers all on (I run for extracted honey), and were in good fix when I moved the others away, and at present I can see no improvement, and some are in not nearly so good condition.

Those I moved have without an exception gone to work and filled up. Most of them were in one story when moved, and I have had to put on supers, and some (probably one-half of them) have filled both, and are now ready to extract, if I chose to do so.

The only mistake I made was in not moving early enough, and not moving all I had. Bees are not unlike people in many respects. For instance, take a colony that is apparently in good, healthy condition, doing very little if anything while the next one to it is storing honey; take it a few miles to new fields, and see how soon they will build up and begin to thrive and store something away for future use. It invigorates and encourages them, and from my experience this season I shall certainly follow migratory bee-keeping in the future. L. L. ANDREWS.

Dr. Miller—I think the subject of migratory bee-keeping is one of the greatest interest to bee-keepers, and at the same time it is a subject of not the slightest interest. It is of deep interest to bee-keepers of Germany and other places in the old country, where in certain seasons of the year they can go to the heather and large buckwheat regions, and almost double their crops in that way; but it is a matter of not the slightest interest to me, because I do not know of a place where I could move my bees to advantage. It might be a matter of some interest to us to know how many there are here who are personally interested in migratory bee-keeping. There may be a good many, or there may be simply a few. It might be well to ask the question whether you have somewhere within 5 to 30 miles from you where you can move your bees and catch a honey-flow that will pay you for the trouble of moving.

Mr. Spaulding—Would you include out-apiaries?

Dr. Miller—No, I would not, as that is not migratory bee-keeping; but if I take some colonies and move them to some other place to catch a honey-flow that I would not otherwise get, that I would call migratory bee-keeping. How many of those who are here are so situated that they think they could make anything by practicing migratory bee-keeping?

Five persons arose in response to the question.

Mr. Westcott—I think that hardly covers the ground. We do not know exactly whether we will be benefited by migratory bee-keeping or not until we hear something from those who have had experience. It is this way: I would like to know whether I could move colonies 40 or 50 to 100 miles on the cars or on boats, etc., and make it profitable to move them. Here in Nebraska our honey-flow comes mostly in the fall of the year. This year it did not start until somewhere about the middle of August. Last year we had no honey-flow until September. If we could move our colonies somewhere in the spring, and keep them until heart's-ease comes into blossom, I think it would be a great advantage to us. I would like to know whether we could do it. I would like to have those who understand the matter explain it to us.

Mr. DeLong—I have never moved any bees on the migratory plan. I live in the south-central part of Nebraska, 160 miles from here. In 1894 and 1895 I lost my entire crop of honey, and almost lost faith in my bees also. I went out to investigate the matter, and within 40 to 60 miles of where I lived there was plenty of honey. I have concluded now that I shall never suffer another loss of stores for my bees, if not of surplus honey, for I can always obtain it by going as far east as the Missouri river. This year up to Aug. 15 I had no surplus honey-flow, and when I found a suitable location, the honey came to me also. I anticipated moving out a couple of hundred colonies of bees. I shall never suffer another total loss, for the reason that some part of Nebraska always has a good crop, and I find that when there are other good crops in any portion of Nebraska, the honey-flow is all right, too. I have never known the honey-flow to fail in Nebraska, when there is a reasonable crop-success. I have made my plans to make migratory work of it, whenever the honey-flow doesn't come to my place. This year I am in one of the dryest parts of Nebraska, while the south and southeast parts of the State have good crops.

Mr. Hatch—I had some experience with Mr. Mendleson in moving 600 colonies 40 to 60 miles last year. It is customary in that part of the State to move in two directions. The sage is the big honey-plant of California, and all bee-keepers try to get as much of that as they can. Then they move in another direction, into the more arid part of the State, and get the wild buckwheat honey, or they can go down into the lima-bean fields and get the lima-bean honey. Mr. Mendleson moved his bees on very large wagons, furnisht with racks, 8 by 16 feet, and then a fence around made of slats, 6 feet high all around, and we would hitch six horses or mules to each load. The wagons are those big California freight-wagons—7-ton wagons; the ordinary farm wagons, such as are used in this country, would not do at all. On those loads he has taken at one time as high as 150 colonies. We moved them in July, and the bees were very strong. They had just finisht up on the sage, and the hives were crowded with bees. It was very hot weather; some days the mercury went up to 100°. The hives were fixt with screens over the top, and also one over the entrance; but he has concluded that the one over the entrance is worse than useless. The hives were common 9 and 10 frame Langstroth hives, with swinging frames, and we put spacers in between, something the shape of your fingers, with a slat across the top, so that the spacers shoved down between the frames. Then he puts a screen over the top that has a 2-inch rim around it, leaving a 2-inch space above the frame. If the colony is very strong, he extracts all the honey in the top of the hives and four frames from the lower part of the hives before he fastens the frames. Then he puts on this screen-cover with the 2-inch rim around it. At each end there is an end-piece projecting up ½ inch. Then he fastens the cover on, leaving a half-inch space between the cover and the screen. In moving the 600 colonies, there were only 10 broken down. It took three days to make the trip, and on some of those days the mercury must have gone up to 100°. It happened to be extremely warm on some of those days. He got about four tons, I think, of lima-bean honey, but for all that it might be considered a financial failure. The direct loss did not amount to so much, but those colonies that seemed to be all right dwindled wonderfully in the next 10 days. The bees were literally worn out in the trip, so that they didn't survive but a short time, and there was a great loss of queens, also. Yet, considering the drouth of this year, it was in one sense a success, because he got the brood-chambers full of the best kind of food. But if I lived in California 40 years, and had the same opportunity, I would not move bees, only to get winter stores. It is a great annoyance, and is very disagreeable work. It has to be done at night, and it is too much wear and tear on the bees. It just simply sapt the life of the bees.

Dr. Miller—Why does Mr. Mendleson think the screen over the entrance is useless?

Mr. Hatch—The bees will crawl in there and die, and the screen over the top seems to work just as well and have the same results.

Dr. Miller—How does he secure so many hives on the wagons? Is there some special provision for that?

Mr. Hatch—He fastens the hives together with what are known in Wisconsin as "butter-tub staples." If you have occasion to fasten your hives together, you will find those very convenient things. But I think we could take small loads on good farm-wagons with two horses, dividing the big load up into three lots, and save at least 12 hours in the trip. It took him three hours in one place to go a mile and a half, where with ordinary farm-wagons he could have driven over it in 20 minutes with 25 hives on the load. And then the wagons would cut through the road. I had been hauling honey and delivering it to the station over the same road, taking a ton at a load, or sometimes a ton and a half, and had gotten over the roads all right; but when those big wagons came to go over they would cut and sink down a foot where the ton-loads had gone over all right. There were some short turns to make, also, and the men would have to stop and dig away so that the big wagons and the long teams could get around. Then they were so tall they were liable to upset. The racks had to go away up above the wheels. They had to have large wheels, and they had to take at least three or four men on each load to balance them in the sidling places. If I was going to move bees, I would take ordinary farm wagons with two horses, and put on what they could haul, and they could get over almost any road.

Dr. Mason—Mr. H. R. Boardman was at our house a few days ago and was talking on this same subject—migratory bee-keeping. He had practiced it to some extent, moving his apiary about 12 miles to catch a honey-flow from buckwheat. He said it didn't pay. It was too much work, and too hard work. Several years ago we moved from the city to a farm, having 75 colonies of bees. It not being much of a honey region, I moved a portion of the bees back to the city, where there was an abundance of sweet clover. It didn't pay.

Mr. Hatch—Did you notice that dwindling of the colonies?

Dr. Mason—It seems to me I did, but it didn't impress itself upon me at the time. I don't think I would ever move my bees again, without some better reason than I had then.

Mr. Rauchfuss—I have had some little experience in this line. We have moved bees into the cleome fields, but only 12 or 15 miles. I did the way that has been described. We put about 40 colonies on a hay-rack load. It always paid us. The smallest average we had was 40 pounds, and we have had as much as 160 pounds. It is practically gathered in two or three weeks, and at a time when we could not get any honey where our bees were located. We are in the alfalfa region, and we moved to the cleome fields. It has paid us.

Mr. Danzenbaker—I had a little experience. In 1897 I moved 6 colonies of bees from North Carolina to Washington. I stopt in Washington 3 weeks, and the 6 colonies stored 200 pounds. Then I moved them 80 miles by cars into the mountains, and they stored 400 pounds more. I felt that that was a pretty good thing, and that I would this year buy a lot of bees in North Carolina and work them there and then move them direct to the mountains. I think it hardly paid me in Washington, for the reason that the honey was not of as good quality in the city. In moving from Washington to Virginia, it was a very hot day—from 95° to 96°—and while I succeeded in getting the bees safely to the mountains, they dwindled. In about two weeks I noticed that they had shrunk a good deal. I had lost a good many bees, the effect of the heat. Altho it didn't kill the bees outright, it weakened them so that it shortened their lives. This year I intended to move 40 colonies from North Carolina. If I had had a carload I could have gotten a good rate, but to move less than a carload would have cost $2.25 a hundred pounds. I could buy the bees in Virginia for about $1.50 a colony. If I had moved them this year, it would have been a failure. While the prospect in Virginia was promising early in the spring, it was the dryest season there I have known in nine years. I have come to this conclusion, that if I were in a place where I could put my bees on a wagon and move them through the night, it wouldn't hurt them at all, and it would pay; but if I had to spend three or four days in making the trip, I wouldn't do it.

[Continued next week.]

That New Bee-Book Offer on page 765 ought to "make your mouth water," if you haven't already one of the standard books on bee-keeping. Remember, that liberal offer will be withdrawn Dec. 10, and no mistake about it. We couldn't afford to hold it open longer than that, as we expect that the edition may be exhausted before that time. Better write quick if you want Prof. Cook's 450-page, cloth-bound bee-book for only 50 cents! Turn to the offer now, and read it—on page 765.

CONTRIBUTED ARTICLES

Honey from Cuba—Other Southern Honey.

BY O. O. POPPLETON.

I wish I could have been at the late convention in Omaha, so as to have helpt in the discussion which followed the reading of my short paper on "Bee-Keeping in Cuba;" but I will join in it a little now with the pen.

No, I said nothing about foul brood; as there was none there when I was in the island, and I know no more about it now than do others who keep up with bee-literature.

What Mr. Danzenbaker said about the large number of mosquitoes in Cuba was news to me. I cannot imagine where he obtained such news, unless from the "yellow journals." I never saw while there any such numbers of mosquitoes as he speaks of. In fact, I should be heartily glad to trade what mosquitoes we have here on the East Coast of Florida, for what mosquitoes they had when I was in Cuba.

Mr. Whitcomb's idea that "it would not take much patriotism to receive what honey might be sent from Cuba," is, of course, of no force whatever. Hard business facts have more to do with commercial transactions than patriotism. I hardly think Mr. Whitcomb has much knowledge of our honey market, especially in our Eastern markets where most of the Cuban honey is sent, or he would not have hazarded the doubt that it would not affect the price of our honey at all. Cuba is without doubt able to send into our markets an immensely larger amount of honey every year than California has yet done in her best years; and every one who has ever disposed of many large crops of honey in our general markets knows just what that means. It means a shrinkage in price of much more than the half cent a pound Dr. Miller estimates. It is not wisdom to shut our eyes to such plain facts as these. Doing so only deceives ourselves. This is one reason—not all, by any means—why I have always opposed the idea of annexing Cuba to this country.

I am aware that the opinion is quite general among bee-keepers in our Northern States, that "climate has much to do with the flavor of honey," the best flavors coming from the North; also, that "Southern honey has a strong flavor." I doubt either of these opinions being correct.

I am very much within bounds when saying that I have produced over 50,000 pounds of honey in each of three widely different localities—northern Iowa, southern Florida and Cuba—and I have found the three extremes of strong, mild and best-flavored honey here in this semi-tropical central location of the three. The South—or, more accurately speaking from a bee-keeper's standpoint—the Southern honey-field, covers an enormously larger area than does the Northern honey-belt, and contains a very much larger variety of honey-yielding flora. Some of these flowers give us very strongly-flavored honey, some very mild, and some between the two extremes. As none of the species of flowers that give honey in the North yields anything down here, it is impossible to note with absolute accuracy whether climate has anything to do with the flavor of honey; but such white clover honey as I have tested from the extreme southern localities where such honey is obtained, was the same, neither better nor poorer than we got in northern Iowa. This tends to prove that climate is not a factor in determining the flavor of any honey.

We are all of us too apt to judge the entire product of any locality by such portions of that product as we ourselves have handled. There is such a large variety of kinds of honey from the South that very few, if any, of us can speak intelligently of Southern honey as a whole. Nearly all, at least five-sixths, of all Cuban honey that reaches the general markets, is from the bellflower, and is, as I said in my essay, a close second to white clover honey in flavor, and its equal in body and flavor. This all comes during the winter months, and is followed during the spring and summer by a light flow of very dark, strong-flavored honey, nearly all of which is used by the bees themselves.

That soldier that Mr. Stilson quotes as saying that Cuban honey is much inferior to our own, was in Cuba during the summer only, when hives contained this dark honey, and he probably saw nothing of such honey as the great bulk of honey that comes from Cuba is like. A person who sees such honey as is in the hives between February and December has no idea of what the main Cuban crop is like.

Dade Co., Fla.

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No. 4.—The Care of Bees for Wintering.

BY C. P. DADANT.

Some people are of the opinion that if we have a cold, steady winter, in which the bees remain confined to their hives for several months, there is less danger of winter losses; because less of the bees wander away and get lost. There would be a point in this, if it were not for the danger of the overloading of their bowels with fecal matter which they cannot discharge in the hive, as I mentioned in the previous article, without greatly endangering the life, or health, of the colony. In a very regular atmosphere, where the temperature is such that they are kept quiet naturally, and neither breed nor have the desire of moving about, as in a properly-regulated cellar, there is little danger of their bowels becoming distended; for they consume a minimum, and if the food be of the proper quality they may remain from three to six months without much danger. But we are now considering an out-door wintering, and, in a climate like that of Illinois, it is urgent that the bees be able to take a cleansing flight several times during the bad season.

For this reason we have to keep them in the best possible location as regards warmth, and the hives would best be facing south if possible. We have had much to do with apiaries exposed to all four of the cardinal points, and found great objections to either north, northeast, or northwest exposures. We once placed an apiary on the farm of a friend who had a few hives of his own, most of which faced north, and who had been most unlucky in wintering. He had it in his head that the bees should not be allowed to fly during the winter, and that was the reason of his placing the bees on the north side of his tool-shed. It took but one more winter to convince him of his error. We had a hundred hives located on his farm, and altho the winter was very unpleasant, our loss was small, while over half of his bees died.

The explanation is very easy. When a warm day came, the hives which were exposed to the rays of the sun began to warm up shortly after sunrise, and in the course of a couple hours the bees were ready for a flight, which they could enjoy while the sun was high. But his hives not being placed so as to have the benefit of the sun's rays, could not get sufficiently warm to stir up the bees, until the greater part of the day had been spent, and those bees which did take a flight were in many cases unable to return, owing to the coolness of the afternoon. Those bees, which enjoyed a good flight, were ready for another siege of cold and storm, and could cheerfully pass through some very rough weather; while the colonies which had no flight soon became restless, and lost their bees steadily till they were all gone.

Even when the snow is on the ground, and it looks as if it would be a pity for so many bees to fly and drop on this white sheet, we find that it is the colonies which take the most lively flight that winter best, and we have paid particular attention to this fact.

I would not, however, wish to be understood as desirous of having the bees to fly in spite of adverse conditions; and when snow is on the ground and the colonies comfortably buried in a deep snowpile, they are probably safer than when exposed to the weather; but if the snow is thawing, and the bees likely to be restless from the warmth of the air, I would allow them a flight every time.

Be the weather ever so cold for two, three, four weeks at a time, if your bees can have a good flight once a month, and if their honey is of fair quality, you need fear nothing of the results.

A few winter flights also have the advantage of inducing the bees to breed early, and altho this is sometimes dangerous, yet in most cases the early breeding is a favorable sign, for the possible spring losses are partly made up by the young, hatching bees.

Of all the exposures, I would prefer the south or southwest. Next would be southeast, and then east. But circumstances alter these rules, and the natural shape of the country must be considered. Where a good fence breaks the force of the winds, something is to be gained. The sole objection we have to the east exposure comes from the steady, drizzling, cold rains of early spring, which seem to do more damage than the dry and brisk west winds. Hancock Co., Ill.

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☞ See "Bee-Keeper's Guide" offer on page 765.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Bottom-Boards in Winter—Hoffman Frames—Plain Sections and Fence Separators.

1. How do you manage about taking the hives off the bottom-boards when you put the bees into the cellar, without disturbing them? Of course you must take them off after you get them down cellar.

2. Have you ever had any experience with the Hoffman frame? and do you think a frame with staples for spacing is better?

3. Did you try no-bee-way sections and fence separators in your T supers the past season? If so, did they work well in them?

4. Will bees winter all right in a good cellar in tight-bottom hives? or will the honey-board have to be raised up a little? WISCONSIN.

ANSWERS.—1. I don't take them off. The bottom-board is fastened to the hive by tobacco staples, and in the winter there is a good space under the hive, the bottom-board being a shallow box two inches deep, open only at the front end.

2. Yes, I have had Hoffman frames in use for a few years, and have more of them than I wish I had. In a place where propolis does not exist they may be all right, but in such a gluey location as I have they are very troublesome. I think staples as spacers are better, altho having had little experience with staples except as end-spacers. I have a great many frames with common nails as spacers, and like them. A common wire nail 1⅛ inches long, with a head ¼-inch across is driven in with a gauge that leaves it out just ¼-inch. The ideal nail would be one with a head ¼-inch thick, so that without any gauge it would drive in just the right distance. Possibly, however, ¼-inch is not just the right space, for with that I get brace-combs between the top-bars.

3. I put them on, but the honey crop being a failure I can't tell anything about them.

4. They need too much attention to winter well with the usual summer entrance; get clogged up with dead bees, and they're better anyway with more chance for air. If the shallow summer entrance is left, raising the cover a little (why in the world have you a honey-board on in winter?) will help to make the ventilation all right.

One-Year-Old or Tested vs. Young Queens.

1. Is it true that every queen-breeder knows that tested queens—or, to be more exact—queens that are as much as a year old, do not bear shipment as well as young queens that have just commenced to lay?

2. Is it true that queens that are one year old are quite apt to turn out poorly?

My private opinion is, if the above statements are true, the majority of queen-breeders on this continent are guilty of a lot of deception and falsehood. B. C.

ANSWERS.—1. I don't know.

2. I don't believe it is true. I suppose, of course, you are speaking of queens that are shipt.

I don't know all about shipping queens, but I see no reason why a queen a year old may not stand a journey as well as a younger queen, providing both queens are in the same condition. If a queen a year old is taken out of a strong colony while she is busy laying 2,000 eggs a day or more, I don't think she will stand the journey so well as a young queen that has not yet reacht 300 eggs in a day. On the other hand, I believe a queen a year old that is taken from a nucleus where she is laying 300 eggs a day will stand the journey better than a queen three weeks old that is laying 3,000 eggs a day.

I should be sorry to believe that a majority of queen-breeders are guilty of deception and falsehood. I feel very sure that a lot that I know are honest and honorable men. I confess, however, that I didn't know that a majority of them had exprest themselves as to the relative value of queens at different ages, and I may be wrong in my views, and will be glad if any of them will correct me if I am wrong.

My impression is that in the majority of cases a queen that has just commenced to lay is in good condition for shipping, and it will take some care to have an older queen in the same condition. Taking any queen at random, I'd give a good deal more for her when a week old than when a year old. If for no other reason, because I would have a year more of her life in one case than in the other. But that doesn't cover the case at all. I wouldn't object to paying five times as much for a queen a year, or even two years, old, in some cases, as I would for the same queen at a week old, even if I knew that at the greater age she would not live three months after I got her.

Let me explain: When a week old, there is little in a queen's record except that it is known she is of such and such a mother. But when she is a year old you can tell what has been the year's work of her worker progeny. Suppose the colony of which she is the mother has stored three times as much honey as the average, and you know of no way to account for it except the difference in blood. Don't you see that I'd be willing to give five times as much for her as I would have given for her a year earlier when no one knew yet what she would accomplish. And when she is two years old, and has made the same record as in the first year, I'd give more for her than when only a year old, because I would feel more sure that blood had made the difference. So the extra price paid for a tested queen is not because she will stand shipping better, but because she is *known* to be good by her performance. Of course, in most cases that testing goes no farther than to know that her worker progeny show her to have been purely mated.

Planting for Honey and to Revive Land—Hives and Supers.

1. As I have two acres of land near my residence in this city, where I keep bees, I would like to sow some honey-plant, which would at the same time tend to revive the land, which is run down by cropping. What would you recommend?

2. What kind of a hive and super arrangement do you use and recommend?

3. What are the advantages and disadvantages of T supers and the section-holder super? and which of the two supers do you recommend? WISCONSIN.

ANSWERS.—1. I doubt if anything will serve your purpose better than sweet clover. It will make a good growth on poor land, even if nothing but yellow clay, and its deep roots dying the second year will leave the soil well opened up. By training them to it, you can have your stock eat sweet clover, altho it seems easier to have them learn to eat the dry hay. I think no one has ever reported a failure to yield honey when sweet clover bloomed, while white clover and most other honey-plants sometimes fail to yield, altho blooming well.

2. I use the 8-frame dovetail to the extent of about 80 hives, and hope to get nearly all my bees into that kind of hive if I live another year. I use the T super. If I had no supers on hand, I might study whether to adopt the T or Ideal super.

3. A T super will take sections of any width. A section-holder made to take a 1⅞ section will take no other size. A few prefer to have open-side sections. For these the T super will not answer and the section-holder will. A section-holder allows the sections to fit close together, thus holding them square. The T tin holds the sections apart, making it necessary to have little separators at the top to hold the sections square and to avoid having a lot of propolis put between them. Some practice and advise shifting the outside rows of sections to the center when the center ones are sufficiently advanced. This can be done mare easily with section-holders than with T supers. I don't think I should thus shift them if I had section-holders. The T tins are perfectly rigid and cannot sag. The bottom-bars of the section-holders may sag. I can fill and also empty T supers with less time and trouble than section-holders. Taken all in all, I decidedly prefer the T super. Whether the Ideal super may be still better is a question not yet decided.

Queenless Colonies.

In June I requeened several colonies, and just about this time the spring flow ended. All were accepted. These were untested queens that came through the mails. In August the fall flow began, and the bees stored the brood-chambers full, but no surplus—in fact, we rarely ever get any surplus from the fall flow in this State, and never get any swarms from this flow. Two of the colonies that had these young queens began to rear great numbers of drones, queens being very prolific, and the hives were overflowing with bees. I began to think they were going to do the very uncommon thing for this section (swarm) in the fall. Late in September—I don't know the exact date—I saw in front of one of these hives a queen which had been dragged out. I now feared this colony was queenless, so I lookt in and saw no queen, but plenty of eggs and brood in all stages, so lifted only a few frames, and know they were all right, queen or no queen, having plenty of drones on hand.

All went well until this morning (Nov. 7), when looking around in my bee-yard, on the alighting-board I found another queen, with six or eight bees gathered around her; she was dead. This was the same hive referred to above. It would be an awful job to find a queen in this hive now, for but few eggs are being laid, the frames being the Quinby size, and last season several were so heavy and large, and bulged badly, that I would be obliged to cut out in order to handle them.

1. Now, do you suppose these bees are queenless? If so, will they survive the winter and be any good if requeened in the spring? Fruit-bloom begins about March 10 to 15.

2. In fact, don't you believe I have been humbugged, and instead of getting young queens I got some that were two or three years old? Every one of the lot proved to be purely mated. GEORGIA.

ANSWERS.—1. Quite likely the colony is all right and has a young queen. (If your queens were clipt you could tell whether the old one was there or not.)

There were plenty of eggs late in September, so the colony will likely be strong in spring with bees not too old, and if it is queenless it might have a queen given to it with advantage.

2. The chances are that the queens were not old. For some reason, or perhaps whim, it is not such a very unusual thing for bees to supersede a queen when only a few weeks old, and a queen that has gone through the mail is more likely to be superseded on that account.

Colony Deserting—Peculiar Smelling Honey.

1. I had strong colony of black bees to abscond, leaving both sealed and hatching brood. On opening the hive I found uncapt cells of honey to be fermenting. The young had gnawed through the capping, but were held in by the web at the bottom of the cells where there was a small white worm. The hive was well shaded, and the bees bringing in some nectar. Between the quilt and cover was a large ant's nest. What caused the bees to leave? and what is the cause and how can I prevent the white worms at the base of the cells?

2. If a queen is caged and left on top of the brood-frames, will the bees act as if they were queenless?

3. During the honey-flow at this season of the year, my hives of bees emit a peculiar odor or a sour smell, something like old granulated basswood honey. Bees are working on heath-like aster. I can smell them when quite a distance away. What is the cause? TENNESSEE.

ANSWERS.—1. If there was no swarming in the case, and the bees simply deserted the hive, I can't tell you why. Honey fermenting in the cells would hardly cause it, neither would the annoyance of the ants nor of the worms. Possibly, however, the combination of the three may have been so bad that the bees became desperate. Black bees will not defend themselves against worms as will Italians. Get Italian blood and worms will hardly trouble strong colonies.

2. No, and yes. They will not show the distress that is shown by a queenless colony by running all over in search of the queen, but they will in many cases show a feeling of queenlessness by rearing young queens the same as when a queen is killed.

3. There are times when the bees are working on certain flowers (and I can't tell what they are), when an extremely offensive odor is present. I don't know why it smells so, but I suppose it's the odor that belongs to that particular kind of honey, just as buckwheat and other honies have their peculiar odor.

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

EXECUTIVE COMMITTEE—Pres., George W. York; Vice-Pres., W. Z. Hutchinson; Secretary, Dr. A. B. Mason, Station B. Toledo, Ohio.

BOARD OF DIRECTORS—E. R. Root; E. Whitcomb; E. T. Abbott; C. P. Dadant; W. Z. Hutchinson; Dr. C. C. Miller.

GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 38. DECEMBER 1, 1898. NO. 48.

EDITORIAL COMMENTS

NOTE.—The American Bee Journaladopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

There is No Occasion for Jealousy among the bee-journals, says the editor of the Bee-Keepers' Review. The appetite grows by what it feeds upon, and the man who takes and reads a good bee-journal gets so much benefit from it that he is inclined to subscribe for another. Mr. Hutchinson then adds:

> "Withholding deserved praise of a contemporary has never helpt any journal in the race for fame and fortune.... Keep your journal bright, fresh, clean, newsy, helpful, and up-to-date—put some *life* into it, and it will live and prosper, tho there are complimentary notices of other journals in every issue."

And Editor Hutchinson's practice conforms to his preaching in this line, as witness the following item in the same issue:

> "The American Bee Journal is giving a most excellently reported account of the Omaha convention. I think it is as good a report of a convention as I have ever read. If you are not a subscriber to the Journal, better take advantage of the offer on the first page of the Review and get this report."

◆

Those Comb Honey Stories that appeared in the New York Evening Post, and which were corrected by Mr. Secor (see page 728), will not likely re-appear in that paper very soon. Mr. Secor has since received the following nice letter of explanation from the editor of the department in the Post, called "Home Thoughts," in which appeared the errors referred to:

> BROOKLYN, N. Y., Nov. 12, 1898.
> Mr. Eugene Secor, Esq., Forest City, Iowa.—
>
> *My Dear Sir:*—As a writer of a paragraph concerning the adulteration of honey, your letter to the Evening Post has been referred to me. I made this statement on the strength of an article on food adulteration duly signed and accredited which came under my notice. I did it conscientiously, because as a mother of four children I felt a regret to learn of this presumable fact. Your letter, however, is authoritative, and I have taken pleasure in making a retracting paragraph, as you will see per enclosed, embodying the main fact of your statement. I shall consider it a favor if you have any little pamphlet that relates to the production of honey which you could send me for my own reading. I agree with you as to the value of honey as food for children, and on my table it appears very often Very truly yours,
> MRS. MARGARET H. WELCH.

Here is the "retracting paragraph" which Mrs. Welch had publisht in a later issue of the Evening Post:

> A statement which is going the rounds of the press, and which was commented on recently in this department, to the effect that even comb honey was not above suspicion of adulteration, is contradicted by those who are in a position to know. In the statement referred to, it was alleged that the cells were imitated in paraffine.
>
> "When," says an expert, "the delicate texture and fragile nature of honey-comb, as made by bees, are realized, it will be easy to understand that it is a mechanical impossibility to make an article in imitation of it that cannot be readily detected. The limit of mechanical ingenuity up to the present time seems to have been reacht when the septum, or base of cells, is made of wax on which the bees will construct cells and complete the comb. This is called 'foundation' by the trade, and it is made so thin that it can scarcely be detected from the natural septum made by the bees. Paraffine, however, is never used for this purpose, because this wax melts at a lower temperature than beeswax. The heat of the colony will melt it, and therefore ruin not only the 'foundation,' but the product as well. It is also impracticable to assert that glucose syrup is fed to bees and by them stored in the comb. Bees will not touch glucose syrup unless starving, and then, of course, they are not in proper condition to store honey."
>
> This opinion is from an authority, and may reassure the housekeeper that when she buys honey in the comb she may reasonably expect to get something gathered from flowers by bees. Honey, it is well known, possesses nutritive and medicinal qualities, and it is the opinion of this same expert that if more honey and less cane sugar and candy were eaten by children, there would be fewer intestinal and kidney diseases.

Mrs. Welch has done well in the foregoing. We are very glad we suggested that General Manager Secor write the Evening Post in this case. Now let others who find untruthful statements about honey, just send a markt copy of the paper containing them to Mr. Secor, when he will do as he did in this instance—call for a retraction, and explain matters to those writers and publishers who have been misled by current errors regarding honey. It will go far toward killing many of the falsehoods that are "on the go" through the public press of to-day.

◆

Pure Food Law for Illinois.—Prof. Davenport, Dean of the University of Illinois at Champaign, has sent letters to the Illinois State Bee-Keepers' Association, asking them to join in a call for a conference at the University, about Dec. 13, to ask the next legislature for a pure food law in this State. This is an important matter, and the State Bee-Keepers' Association ought to be represented. No doubt the Executive Committee will see to it.

◆

Southern Honey and Feeding Glucose.—Editor E. R. Root, in Gleanings for Nov. 15, makes the following corrections in the proceedings of the Omaha convention as reported in this journal:

> The stenographic report of the Omaha convention proceedings is unusually full and accurate. I have read nearly all of it, and see very few if any corrections to make. I note, however, in the American Bee Journal (page 660), in the report of this convention, where I speak of the adulteration of honey and the difficulty of feeding bees clear glucose, the reporter makes me say this: "We are trying every year to feed pure glucose to bees. I learned this summer that you could dilute it down with water, and they would take it provided there was nothing else that was coming in." What I *meant* to say, and what I probably did say, was that we tried

one year to feed pure glucose to bees, instead of our trying to do it *every* year. This last construction might imply that I had some sinister motive; and after all I have said aganst glucose honey and glucose in general, this would be rather a travesty on your humble servant.

The editor of the American Bee-Keeper protests (and rightly, too) against the statement wherein I am made to say in the report of the Omaha convention, that "Southern honey has a strong flavor which is liked by some." What I actually said, or at least thought I said, was that *some* Southern honey has a strong flavor. In the general discussion, we were talking about the peculiar flavors of different honeys, and why some preferred a kind of honey that another disliked. I mentioned the fact that buckwheat honey in New York is preferred by some to anything else, and that, in a similar way, there are certain flavors in Southern honeys that are liked by some and disliked by others. Mr. Hill says he would not for a moment attribute to me the "thought of a wilful misrepresentation," and that he believes I am "utterly incapable of studied deception." I thank him most sincerely for such a statement; and while I may not deserve it, I try to be what the language implies.

I lay no blame to Mr. York, as it takes a pair of sharp eyes to catch every error that may creep through the stenographer's pencil.

Even if we had "a pair of sharp eyes," or several pairs, it would make no difference, for no one person could *remember all* that was said in discussion at a national convention. So of course we have to rely upon the stenographer's report. But we are very glad to have necessary corrections made, and would be pleased to receive them direct, so as to publish the corrections as soon as possible after the appearance of the errors.

◆

Saltpeter Rags for Smokers.—Editor Root, in Gleanings, tells in the following how Dr. Miller uses saltpeter rags for lighting the bee-smoker:

While visiting at Dr. Miller's I saw him pull out a piece of rag from his tool-basket, light it with a match, or apparently attempt to light it, and put it down the smoker. There was no flame, and it seemed the rag had gone out.

"Here, that's gone out!" I exclaimed.

"Oh! that's all right," replied the Doctor; "it will go;" and then he proceeded to cram in some planer shavings.

"You will put it out now, I am sure," said I.

"I think not," he replied; and at this he began working the bellows, when it immediately began to send out quite a volume of smoke.

"The rags in our locality do not burn that way," I remarkt.

"Perhaps not," returned the Doctor; "but we dip ours in saltpeter water, and then dry them. See? Just the moment the flame of a match touches the rag it will catch fire and stay lighted."

Dr. Miller formerly soakt his rotten wood in saltpeter water, and then after it was dry used it for lighting his smoker. But the rag lights instantly, and is then pusht into the smoker. No cramming in of other fuel will put it out. This saves much annoyance in lighting the smoker.

◆

Ordinances Prohibiting Bee-Keeping.—For the benefit of bee-keepers who may be annoyed by their city officials attempting to pass ordinances against bee-keeping, we take the following from a local newspaper of Riverside, Calif., dated Oct. 1, 1898:

City Attorney Purington rendered the following opinion:

To the Honorable Board of Trustees of the City of Riverside.

GENTLEMEN:—Some time ago you referred to me the question whether an ordinance prohibiting the keeping of bees within the city of Riverside would be valid.

I have been unable to find but one decision directly in point, and that is the case of the city of Arkadelphia vs. Clark, decided by the Supreme Court of the State of Arkansas, June 22, 1889. The court held that neither the keeping, owning nor raising is in itself a nuisance within a city, but whether they are so or not is a question to be judicially determined in each case. Such an ordinance undertakes to make each act a nuisance without regard to the fact whether it is so or not, or whether bees in general have become a nuisance in the city. Such an ordinance is therefore too broad, and invalid. From the reasoning in the opinion, and from the authority cited in the brief submitted to the court, I am of the opinion that an ordinance of the kind would be held unconstitutional by the courts of this State.

It may be well to preserve the foregoing legal opinion for future use. It might come handy if at a time when some would-be-great "city fathers" make an attempt to destroy bee-keeping within their city limits. Bee-keeping is not a general nuisance just yet.

◆

Honey and Health.—An eminent medical authority says honey should again occupy at least part of the empire unjustly wrested from it by sugar, says an exchange from Germany. Sugar is undigested, and taken pure is injurious, producing flatulency, acidity of stomach, and sick headache. Pastries prepared with much sugar, taken in large quantity, spoil the stomachs of children, and even of adults. Those who have stomach troubles can endure the least quantity of sugar. The small amount of muriatic acid in the healthy stomach can transform but a a small amount of sugar, any surplus over this disturbs the entire alimentary canal for days. The sugar contained in honey is already transformed, so it may be taken in large quantities by children and invalids. Where children are fed with cow's milk, honey should be added, for cow's milk is not as sweet as human milk.

THE WEEKLY BUDGET

MR. JAS. A. STONE, of Sangamon Co., Ill., Secretary of the Illinois State Bee-Keepers' Association, sent us a dollar for the Langstroth Monument Fund last week.

MR. J. A. PEARCE, of Kent Co., Mich., writes:

"I fully endorse the idea of putting bees out early in the spring, say from the first to the middle of March."

MR. T. R. JOSLIN, of Douglas Co., Nebr., wrote us Nov. 21:

"I have had a grand success with my bees this season, and I give the credit to the 'old reliable' American Bee Journal.

THE A. I. ROOT CO. had a fire scare at their factory the night of Oct. 29. But owing to their efficient automatic fire-equipment no great damage was done. We congratulate them upon their escape from a serious conflagration.

MR. W. W. WHIPPLE, of Arapahoe Colo., wrote us Nov. 7:

"I do not want to miss a single number of the American Bee Journal, as it is the one thing I rely upon for up-to-date information in bee-keeping, and I do not see how any one can get along without it."

MR. H. W. BUCKBEE, of Rockford, Ill., proprietor of the Rockford Seed Farms, is one of the leading florists and seedsmen in all the West. Nov. 19 he exprest us a large box of most beautiful flowers—roses and chrysanthemums of several varieties. We loaned them the next day for pulpit decoration, and they were greatly admired by the church people. Mr. Buckbee will soon be found among our most reliable advertisers again, and we trust our readers will remember him when in need of anything in his line.

MR. J. H. MARTIN (Rambler) has lately wheeled from California over into Oregon, in which State he hoped to do a good deal of wheeling, but it seems he encountered such wet weather that he had to do most of his traveling by rail. During his rail trip from Roseburg to Salem the railroad company sent his bicycle off in a direction that he intended it should not go. When he presented his check for it at Salem he was not able to get it. He had to proceed to Portland mourning the loss of his wheel. But the wandering wheel was found later.

We understand that Mr. Martin expected to make a hurried trip among the bee-men of Oregon and Washington, and then take the steamer at Seattle for San Francisco. Owing to the continuous wet weather he will hardly be able to call on many of the northern apiarists.

Mr. Jos. Beaudry, of Quebec, Canada, sent us $1.00 Nov. 23, for the Langstroth Monument Fund. There is room for more dollars in this Fund, and we should think that all who can afford to do so would contribute their share promptly. All that is sent to us on that account will be forwarded at once upon receipt to the proper place.

Editor Emerson T. Abbott, of the Modern Farmer and Busy Bee, is on the program for Thursday, Dec. 8, at 7:30 p.m., at the 41st annual metting of the Missouri Horticultural Society, to be held at Columbia, Mo., beginning Dec. 6. His subject is "Bees in Relation to Horticulture." Mr. Abbott will interest those horticulturists, and they will ever afterward be better friends to bees and bee-keeping.

Mr. J. H. Tickenor, of Crawford Co., Wis., writing us Oct. 29, had this to say:

> "I like the American Bee Journal very much. It is certainly a money-saver to everyone that 'bee-lieveth,' to the Jew first and also to the Gentile. I like the short method of spelling adopted by the Bee Journal. I also like criticisms, for they are educative, but I think the majority of the bee-keeping fraternity would be with me in saying: Let's not jangle through the Journal, or elsewhere. I have a six-months' boy whose name is Victor Joseph Langstroth."

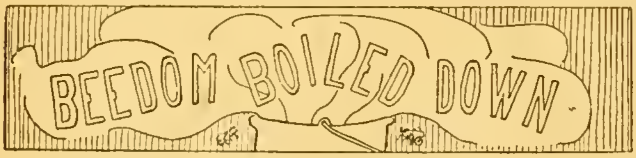
Mr. Geo. W. Blair, of Mason Co., Mich., when renewing his subscription for 1899, and also taking advantage of our $1.50 offer for both the Bee Journal and Prof. Cook's "Bee-Keepers' Guide" (see page 765), wrote as follows:

> "It makes me feel kind of guilty to get it so cheap. Couldn't do without the Bee Journal, you know."

Yes, that $1.50 offer is enough to make a fellow "feel kind of guilty" when he accepts it, but that's all right—just come on with your orders until Dec. 10, when the offer will positively be withdrawn.

Somnambulist, in the Progressive Bee-Keeper, gives this comment on facing honey:

> "Among the correspondents of the bee-journals one finds a good deal of tit for tat on facing honey. While we cannot be *too* scrupulous about having the different sections which constitute a case of honey, of equal merit, there are but few of us who can refrain from putting the most beautiful to the front. 'Tis simply human nature that, in displaying any of our belongings, either to a prospective buyer or the every-day family visitor, to bring out in bold relief the best we have. The people are few and far between who are anxious to bring defects into the glare of the searchlight, unless, indeed, it be those of an enemy."



The Value of Foundation in Sections lies chiefly, according to the belief of Editor Hutchinson, of the Bee-Keepers' Review, in the fact that "in a heavy flow the use of foundation enables the bees to furnish storage for honey that could not be stored if comb were built naturally." He does not agree with the belief that worker-comb looks better in sections than drone-comb.

Immunity to Stings.—In response to a circular sent out by Dr. Langer to German bee-keepers, 144 had become insensible to the effect of stings, nine claimed they had been so from infancy, and 26 declared that they had the same sensibility as at the beginning of their apicultural career. The number of stings required to reach immunity varied; some required only 30, and others 100 or more.—Prakt. Wegweiser.

Comparative Quantity of Comb and Extracted Honey.—In the discussion at the Ontario convention, last year, with 75 percent of the honey sealed before extracting, Mr. Hall thought little more extracted than comb honey could be secured; Mr. Post thought about 65 of comb to 100 extracted, Mr. Picket 60 or 65 of comb to 100 extracted, and Mr. Darling thought less was secured in sections because bees disliked working in such small spaces.—Canadian Bee Journal.

Do Bees Move Eggs or Larvæ?—Referring to what Doolittle says about bees moving larvæ (American Bee Journal, page 578), Critic Taylor, of the Bee-Keepers' Review, thinks the testimony strong in favor of the belief that workers do move larvæ, and says he has been watching for just such cases for years, and in some cases thought he saw evidence in favor of such moving, but continued observation showed him his error. So he registers doubts as to Doolittle's correctness.

The Building of Drone-Comb.—I. W. Beckwith says, in the Bee-Keepers' Review, that his experience is at variance with the rule that queenless colonies build mainly drone-comb. He divides colonies and allows the queenless part to fill the hive with combs while the queen is maturing, and finds very little drone-comb built unless the bees are *hopelessly* queenless. He quotes Dadant as saying: "If all, or part, of the store-combs of a hive are removed, the bees will rebuild large cells, at least three times out of four." And says his experience is the reverse of this, for when he removes most of the combs from a populous colony it is always replaced with worker-comb. But are these last the "store-combs" that Dadant speaks of, Mr. Beckwith?

Improving Our Honey-Resources.—"If one-half the energy that is now expended in inventing new hives and other appliances," says Ed Jolly in American Bee-Keeper, "searching for new races of bees, breeding for beauty, etc., were turned to the betterment of the resources of the country, bee-keeping as a business would be a more lucrative one"—a proposition that is hard to gainsay. He advises sowing white clover seed along roadsides and streams, fence-corners, pasture fields, and through the woods. Also starting linden trees. In the fall, rake the old rotted leaves from the ground in the forest, stir the soil a little with a rake, then sow the seeds and cover lightly with well-rotted leaves or compost. A year later the seedlings may be transplanted. Slips may be cut in early spring, stuck in a marsh or wet ground, and the following spring they will be found rooted.

Boiled-Down Laziness.—Critic Taylor, in the November Bee-Keepers' Review, says he is sometimes discouraged in the work of a critic, because there is so much careless statement and careless editing that ought to be reformed. As a good example of both, he refers to page 618 of the American Bee Journal, and quotes as follows:

"Critic Taylor, speaking of Doolittle's plan of preventing after-swarms, said; 'Perhaps Doolittle is led to practice his method from the fact that he is largely using the Gallup hive and wishes to engage others toward a favorable opinion of that hive.'"

Mr. Taylor says he could never have written such absurd nonsense, and is somewhat at a loss to know whether to attribute the misrepresentation to carelessness or impotent malice. Neither, Mr. Taylor; it was laziness—pure, boiled-down laziness. On page 268 of the Review, Mr. Doolittle gave as a paraphrase of what Mr. Taylor had written: "Perhaps Taylor is led to practice his method from the fact that he is largely using the Heddon hive," etc.; and instead of turning back to see what Mr. Taylor had actually written, it was an easier, and a much lazier, way, to jump at the conclusion that, in paraphrasing, Mr. Doolittle had merely changed the proper names, and that conclusion was unfortunately acted upon. What Mr. Taylor actually did write was this:

"Perhaps Doolittle is led to practice this method from the fact that he is largely engaged in the production of queens, since by this process he gets plenty of good queen-cells almost ready to hatch."

Which goes to show that it is not always easy to look upon a paraphrase and construct therefrom the thing paraphrased. It was a case of unpardonable carelessness and laziness, for which a thousand apologies are hereby tendered to Mr. Taylor, with many thanks for being let off so easy, and a promise never again to work backward from a paraphrase.

Every Present Subscriber of the Bee Journal should be an agent for it, and get all other bee-keepers possible to subscribe for it. See 6 big offers on page 746.

BEES, HONEY, MONEY

Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

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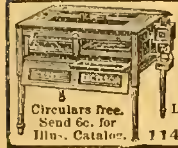

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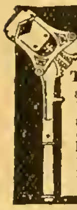

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Being the cleanest is usually worked the quickest of any Foundation made

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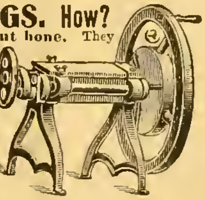

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DANDY Green Bone Cutters with or without gear are the best machines for preparing bone for fowls. **Cut fast, turn easy.** Catalogue and prices free.

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Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**

Cash for Beeswax. BELL BRANCH, MICH.

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GENERAL ITEMS

Shallow Extracting-Frames, Etc.

In Mr. Deacon's article on extracting-frames, on page 563, he states that the Root shallow extracting-frames are 4½ inches deep. If he will examine their catalogs of 1897 and 1898 he will find that the *only* shallow extracting-frames listed by the Roots are of the "sensible depth" of 5⅜ inches; in fact, just the same depth as the Heddon frames.

My bees did fairly well this year. I wintered four colonies, lost none, and increast to nine, besides selling a number of queens and a few frames of bees. They averaged 75 pounds each of comb honey. There are about 100 colonies in all near here, and several bee-keepers report a poor crop, due, I think, to the "let them alone" policy.

E. F. ATWATER.
Yankton Co., S. D., Nov. 18.

◆

Fair Season.

I got the bee-fever four years ago, and have at present 3 strong colonies of hybrids and one Italian. The past season was fair. Last year was extra good, which started many new bee-keepers this year. My bees are all in Cary-Simplicity hives, which seem to be the standard in this section. There were very few swarms this year.

ALBERT HEDLER.
New Haven Co., Conn., Nov. 18.

◆

A Lady Bee-Keeper's Report.

I commenced the season of 1898 with 31 colonies in good condition, wintered on the summer stands. I kept them from swarming as much as I could, but they increast to 45 colonies. I have doubled some, and have now 36 good colonies. My honey crop this season, as nearly as I can estimate it, is about a ton. The early honey was very dark. The rain spoilt the early white clover, but when the basswood commenced it came very rapidly, and my sympathy was not with the busy bee, but with the busy bee-keeper. I had 1,000 pounds of basswood mixt with a little white clover, but the last that I took off was yellowed a little with the early corn-blossoms.

The late honey crop was very light, owing to the drouth in this part of the State.

I like the Bee Journal's reform in spelling ever so much; and I shall watch the Journal this winter very closely to learn all I can about managing the plain section and fence separator. So let all the lights shine on that subject, for I, for one, want my honey to look as well as any one's when it goes to market.

MRS. PAUL BARRETTE.
Crawford Co., Wis., Nov. 16.

◆

Bees in Fair Condition.

Bees in this vicinity (Marion Co., Ind.) are in fair condition to go through the winter, altho the quality of the stores is not A No. 1. My bees in Vanderburgh county are in winter quarters, with an average of 40 pounds of stores per colony. The regiment of which I have been a member (159th Ind. Vol.) is to be mustered out Nov. 23, and we will all get home for a turkey on Thanksgiving. Pennsylvania seems to be about the best honey State I was in in the East.

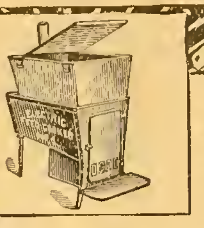
Nov. 18. J. C. WALLENMEYER.

◆

Best Crop in Six Years.

Mr. Holtermann has not said too much of the honey-flow in this part of our country, if we can judge by our own locality. Indeed, it is the first crop I have had in six years, since I began, and we are near the 76th latitude north.

Last year I had 21 colonies in the spring, increast them to 29 in buckwheat time



A FREE BOOK on Feed Cooking.

We are sending out to all interested parties who ask for it, a very entertaining and instructive little book on this subject. It deals with all phases of the subject—the cost, advantages and profit of the practice. Incidentally it tells about the

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which are made of **best gray iron castings and lined with steel plates,** with boilers of extra quality **galvanized steel.** So made they **require less fuel and heat quicker** than all others. Made in **three styles** and **five sizes,** from 25 to 100 gallons capacity. Heavy stock—can fill orders instantly. Write.

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CHICAGO, - ILL.

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Such is the American Poultry Journal. **50 cents a year.**

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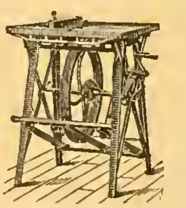

Barnes' Foot-Power Machinery.

Read what J. I. PARENT, of CHARLTON, N.Y., says—"We cut with one of your Combined Machines, last winter 50 chaff hives with 7-in. cap, 100 honey-racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make and we expect to do it with this Saw. It will do all you say it will. Catalogue and Price-List Free.

Address, W. F. & JOHN BARNES,
No. 995 Ruby St., Rockford, Ill.

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FIRST PRIZE WINNERS

OUR LARGE '99 POULTRY GUIDE FREE. Something entirely new; largest book out. Worth $25. to anyone; tells all about poultry; how to be a winner, how to **MAKE BIG MONEY** with eggs or stock for market or fancy. Send 15c for mailing and postage.

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The RURAL CALIFORNIAN

Tells all about Bees in California.

The Yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by and expert bee-man. Besides this, the paper also tells you all about **California Agriculture and Horticulture.** $1.00 per Year; Six Months, 50 cents. Sample Copies 10 cents.

THE RURAL CALIFORNIAN,
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Sweet Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Sweet Clover	.60	$1.00	$2.25	$4.00
Alsike Clover	.70	1.25	3.00	5.75
White Clover	.80	1.40	3.00	5.00
Alfalfa Clover	.60	1.00	2.25	4.00
Crimson Clover	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, wanted by freight.

Your orders are solicited.

GEO. W. YORK & CO , 118 Mich. St., Chicago.

ONE MAN WITH THE UNION COMBINATION SAW

Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing, Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery Sold on Trial. Catalogue Free.

SENECA FALLS MFG. CO.,
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IT WILL PAY YOU TO ATTEND THE

Eclectic Shorthand College

Headquarters of the Cross Eclectic System. Lessons by Mail a specialty. Send stamp for alphabet,

94 Dearborn Street, CHICAGO.

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Buy Your Sections Now

while we offer them at a LARGE DISCOUNT, having added to our plant one of the most complete one-piece section machines, enabling us to turn out the most beautiful sections on the market. By sending us a list of Supplies wanted we can save you $ $ $. R. H. SCHMIDT & CO., Box 187, SHEBOYGAN, WIS.

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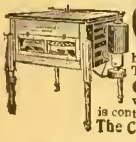

CHICKEN MONEY and how to get it; how to mate, breed, feed and market poultry. Cuts and plans for building poultry houses and cost of same. These and many other things together with CYPHERS INCUBATOR which is sent freight paid to every purchaser is contained in our Poultry Guide. Sent for 10 cts.

The Cyphers Incb. Co. Box 50 Wayland, N.Y.

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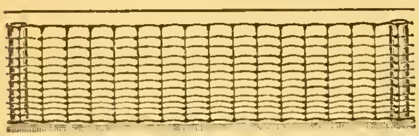
COMB FOUNDATION Wholesale and Retail.

Working Wax into Foundation for CASH A Specialty.

Hives, Sections, and a full line of Supplies. The best of everything. Write for Catalog, with prices, and samples of Foundation and Sections.

BEESWAX always wanted for cash or trade.

GUS DITTMER,
AUGUSTA, WIS.



Don't Shovel Snow

all winter from the lane, but buy Page Fence and have a clear track. No drifts behind our Winter Styles. Ask for prices.

Page Woven Wire Fence Co., Adrian, Mich.

(about Aug. 7), and had 150 pounds surplus of that dark stuff—not a drop of clover honey on account of it being killed by a big spring frost.

This year my bees were not very strong. I lost 5 colonies in springing, but there was so much dandelion bloom, that bees began to swarm May 31 till the middle of July. Clovers began to yield June 8, and it lasted until the middle of the next month. The strongest part of the honey-flow was in the beginning of that month.

I harvested 2,500 pounds of clover extracted honey, and 1,200 pounds of buckwheat; that source yielded 12 days, but was not good. My best colony gave me 215 pounds; the largest yield prior to that was 107 pounds of extracted honey. I have now 51 colonies in good wintering condition, which are in the cellar.

Extracted honey sells in Montreal at, white, 6½ to 10 to 12 cents at retail; dark, 5 to 10 cents; comb honey, 8 to 12½ cents.

Last year was your turn for a good honey year; this year it was ours.

JOS. BEAUDRY.

Quebec, Canada, Nov. 23.

Bees Did Fairly Well.

Bees in this section of the State did fairly well the past season, considering that we had a spell of rainy weather in the spring, in the time of fruit-bloom. We get our honey mainly from white clover, altho maple, greasebrush, fireweed, buckleberry bloom, etc., contribute their share of it, most seasons.

A number of bee-trees are found in the woods. Out of a dozen or more trees I have cut this year, I think one (a large hollow cedar) is worth mentioning. They had 6 combs from the ground up 8 feet high, the widest one (in center) being 11 inches, diminishing on both sides to 3 inches. They had about 175 pounds of honey stored.

I like the American Bee Journal first-rate; I think it is well worth the subscription price to any bee-keeper.

AND. OLSON.

Jefferson Co., Wash., Nov. 15.

Report for the Past Season.

I started in last spring with 20 colonies, increase to 45, and caught 6, making 51. I put on 1,500 one-pound sections, and got 200 pounds of honey, principally basswood and buckwheat. Bees are in good condition for winter.

I have wintered my bees in a shed for three years; I lost only one colony from starvation last winter. The dimensions of the shed are—length 64 feet, width 5⅓ feet; front, 4½ feet high; rear 3½ feet high. I place hives in rows 8 inches high from the ground, and 3 inches apart, and one foot space back of the hives, and then put on chaff cushions and pack the hives in chaff, then nail boards ½ to ⅔ of the way down in front, so that the bees can fly out any time they see fit. I take the bees out of this shed about April 10. I use the 8-frame Langstroth hive, and run for comb honey exclusively.

The American Bee Journal is a very welcome visitor.

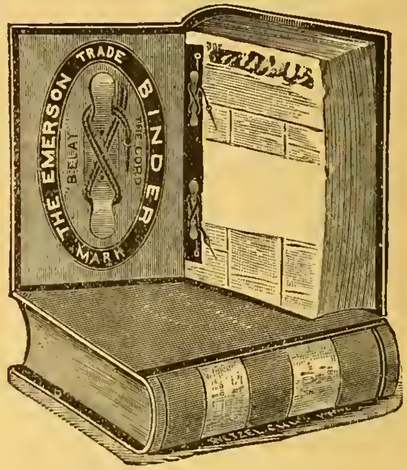
ANDY SCRIMGER.

Floyd Co., Iowa, Nov. 23.

Good Season—Sweet Clover.

We have had a very good honey season. White clover was never so plentiful before as last summer, and was in bloom for three months, but it was too dry at the end of the season, so the bees had to work mostly on sweet clover, which was in bloom until the first part of November. The beginning of October I gave the bees extracted combs to clean out, and at the end of the month most of them were filled with fine honey. I think sweet clover is the only honey-plant we may depend on. But the city officers are keeping it down very close. Last summer when I came home at 9 o'clock in the morning, I found three men, armed with scythes, engaged in cutting down my sweet clover, which grew along the street. I

The Emerson Binder



This Emerson stiff-cloth-board Binder for the American Bee Journal we mail for 60 cents; or will send it with the Journal for one year—both for $1.50. It is a very fine thing to preserve the copies of the Bee Journal as fast as they are received. If you have the "Emerson," no further binding is necessary.

GEORGE W. YORK & CO.,
118 Michigan Street, - CHICAGO, ILL.

WONDERFUL DOGS It is simply marvelous how the Scotch Collie dog will learn to do your work for you, as well as protect your children and your home. Everybody pleased with ours and the prices. They are secured as fast as we can produce them. Write at once for particulars to POTTS BROS., box 10, Parkesburg, Pa.

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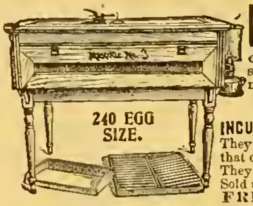
240 EGG SIZE.

MAN OR WOMAN or even a little child can make an entire success of the poultry business when they use the MASCOTTE INCUBATORS and BROODERS They are so simple and perfect that one cannot fail with them. They hatch every fertile egg. Sold under a positive guarantee. FREE illustrated catalogue.

Mascotte Incubator & Lumber Co., Box 11, Bedford, Ohio.

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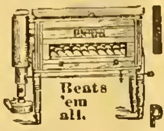
FARM BEE-KEEPING

Is one of the leading departments in the Modern Farmer and Busy Bee, the best general FARM and BEE paper in existence. Write for sample copy to-day, and for clubbing rates with any paper you want. Address,

Emerson T. Abbott, St. Joseph, Mo.

A LOW CLUBBING RATE:

Send $1.50 to the American Bee Journal office, and get both the Modern Farmer and the Bee Journal for a year. G. W. Y. & CO.


Beats 'em all.

INCUBATOR SUCCESS depends upon the following named essentials—proper distribution of heat and moisture and perfect regulation and ventilation. These points attain perfection in the PETALUMA INCUBATOR

Add to these points superior construction and finish and you have a perfect machine. They deal only in high percentages of hatch. Sizes from 50 to 350 eggs. Prices $10. up. WE PAY FREIGHT ANYWHERE in the U. S. Catalogue free. Petaluma Incubator Co., Box 91. Petaluma, Cal.

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INCUBATORS & BROODERS ....All about them. How to make and how to use successfully. Fully illustrated in Poultry Keeper Illustrator No. 2, 25 cts. Send for free sample copy of POULTRY KEEPER with particulars about other valuable poultry knowledge. Address, Poultry Keeper Co., box 10, Parkesburg, Pa.

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A GREAT ❋❋❋❋❋❋❋❋❋❋
COMBINATION OFFER

COOK'S "BEE-KEEPERS' GUIDE"
FOR ONLY FIFTY CENTS.

You ought to have a good bee-book, if you haven't one already. Prof. A. J. Cook's Manual, or "Bee-Keepers' Guide," is one of the very best publisht to-day. It is bound substantially and neatly in cloth, contains over 450 pages, and retails at $1.25 a copy, postpaid. But we are going to make you an offer, **for the next three weeks** (positively ending Dec. 10), **that will open your eyes.** Here it is:

To every subscriber who before Dec. 10 will pay his subscription to the American Bee Journal to the end of next year (1899) we will mail a copy of Prof. Cook's "Bee-Keepers' Guide" for only 50 cents extra. That is really getting a dollar-and-a-quarter bee-book for only 50 cents. Can you afford to miss such a chance as that? Address,

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

Ho, for Omaha!

As we have many customers in the Northwest, and believing they will appreciate the low freight rates obtained by purchasing goods from a railroad center nearer to them than we are, getting a direct through-freight rate, thus cutting the freight in half, we have establisht a branch house at 1730 South 13th St., Omaha, Neb., where we will keep a complete line of all Apiarian Supplies, the same as we do at Higginsville, Mo. With the quality of our goods, we believe most bee-keepers in the West are already acquainted, but to those who are not, we will say that our goods are par excellent. Polisht, snowy-white Sections, beautiful, straw-colored transparent Foundation, improved Smokers and Honey Extractors, and all other first-clas sgoods, are what we sell. Kind and courteous treatment and honorable dealing our motto. On these bases, we solicit an order, feeling sure that if we sell you one bill of goods you will be our customer in the future.

☞ PROORESSIVE BEE-KEEPER, 50c per year. "Amateur Bee-Keeper," 25c. Both for 65c., postpaid. Sample copy of the PROGRESSIVE free, and a beautiful Catalog for the asking.

Address, Leahy Manufacturing Company, **Higginsville, Mo.,** or **1730 South 13th St., Omaha, Neb.**

Please mention Bee Journal when writing.

26c Cash Paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **26 cents a pound — CASH** — upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

Page & Lyon Mfg. Co. New London, Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of.

Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

Please mention the American Bee Journal. 7Atf

Please mention the Bee Journal when writing Advertisers.

askt them what authority they had in cutting down my clover? They answered, "The street commissioner," and that they were told to clean every street from weeds.

I live on a 5-acre farm surrounded by larger farms; our street leads into the country, and is not graded. Nearer town, on the main street, Canada thistles and milkweeds are found in great abundance, which they think are not so dangerous as sweet clover!

My bees are in their winter quarters on the summer stands since the first of November; boxes lined with coffee sacks and straw board are put around the hives. Nov. 2, 3, 5 and 8 I noticed them carrying in pollen, and on the 10th we had a severe snow-storm. To-day (Nov. 21) the bees are carrying pollen again. CHAS. DUCLOS.

Saginaw Co., Mich.

Against Importing Apis Dorsata.

I have read in the American Bee Journal and Gleanings so much about Apis dorsata. I never paid much attention to it, as I had an idea that the writers on that subject would find out sooner or later what a great mistake they make to entertain the idea of importing those bees to the United States. We have no State in the Union where this bee could live and prosper. It requires a very hot climate, say 75 degrees about the lowest.

Now you will be astonisht at the reason why. This I will explain in a few words. The large bees of the Philippines, or Apis dorsata, *will not stay in any box or hollow tree*, but will build their combs in the woods on branches of trees, etc., sometimes 1½ yards long by one yard wide. I saw some such 30 years ago when I was in the Philippines. I spoke to Manila men about it, altho I had no idea of keeping bees at that time, and they told me that they *never will stay* in a box; even if you put them in a box they will go to the woods and make their nest in the branches of trees. Now bring them to this country in a box, open it in the summer time and they will leave and go to the woods, and build combs on branches of trees; and as soon as the winter sets in they will perish, even here in Louisiana, where the mercury goes very seldom below 30 degrees.

I hope this explanation will be satisfactory, and that Apis dorsata will be let alone. Even Cuba, I think, is too cool for them, as the Philippines are a great deal warmer during the whole year.

J. H. HEMPEL.

St. John Parish, La., Nov. 22.

Illinois State Convention Report.

Our meeting of the Illinois State Bee-Keepers' Association is again a thing of the past. The attendance was not large, but we hope for much good to result from it. Hon. N. E. France, State Inspector of Apiaries, of Wisconsin, was with us, and we are sure he was of great use to the Association in the advice he gave as to the manner of procedure to secure a foul brood law in our State, such as they have in Wisconsin.

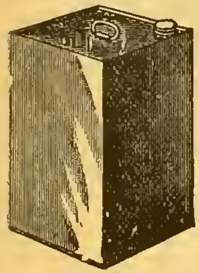
The election of officers took place on the first day, resulting the same as last year, viz.:

President, J. Q. Smith, of Lincoln; 1st Vice-President, C. P. Dadaut; 2nd Vice-President, A. N. Draper; 3rd Vice-President, S. N. Black; 4th Vice-President, Geo. Poiudexter; 5th Vice-President, Geo. W. York; Treasurer, Chas. Becker; Secretary, Jas. A. Stone, of Bradfordton.

On motion, the Executive Committee (which is by the constitution the President, Secretary and Treasurer) was made the committee on premium list, and later was also made the committee on legislature. It was voted that they be instructed to so frame the Act in the foul brood law, as to have the Governor appoint a State Inspector of apiaries, as recommended by the Illinois State Bee-Keepers' Association; whereupon the Association voted to recommend our President, J. Q. Smith, of Lincoln, in case a foul brood law is enacted.

If Illinois bee-keepers want a foul brood

HONEY ✻ FOR ✻ SALE.



Best White Alfalfa Extracted...

ALL IN 60-POUND TIN CANS.

This is the famous white extracted honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can hardly get enough of the Alfalfa extracted.

Prices are as Follows:

A sample by mail, 8 cents in stamps, to pay for package and postage. By freight—One 60-pound can, 8 cents per pound; 2 cans, 7¾ cents per pound; 4 or more cans, 7½ cents per pound. Cash must accompany each order.

This honey is **ABSOLUTELY PURE BEES' HONEY**, the finest of the kind produced in this country.

☞ We would suggest that those bee-keepers who did not produce any honey for their home demand the past season, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. The Circular, "HONEY AS FOOD," will be a great help in creating customers for honey. Address,

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

We want

EVERY BEE-KEEPER

......To have a copy of......

Our 1898 Catalog

☞ Send us your name and address and we will take pleasure in mailing you a copy.

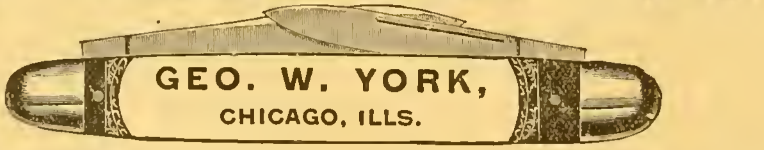
G. B. LEWIS CO., WATERTOWN, WIS.

Special Agent for the Southwest—

E. T. ABBOTT, St. Joseph, Mo.

Mr. Abbott sells our Hives and Sections at factory prices.

THE "NOVELTY" POCKET-KNIFE



Your Name on the Knife.—When ordering, be sure to say just what Name and Address you wish put on the Knife.

The NOVELTY KNIFE is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed an AMERICAN BEE JOURNAL reminder, and on the other side, name and residence of the Subscriber.

The material entering into this celebrated knife is of the very best quality; the blades are handforged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring steel, and the finish of handle as described above. It will last a lifetime, with proper usage.

Why purchase the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the Novelty is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelties, your pocket KNIFE will serve as as an identifier; and in case of death, your relatives will at once be apprised of the accident.

How appropriate this knife is for a Christmas, New Year or birthday present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, a lady to a gentleman, or vice versa, a son to a mother, a husband to a wife, a brother to a sister or a gentleman to a lady—the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid, for $1. , or give it as a Premium to the one sending us **three new Subscribers** to the BEE JOURNAL (with $3.00), and we will also send to each new name a copy of the Premium Edition of the book "Bees and Honey." We club the Novelty Knife with the BEE JOURNAL for one year, both for $1.90

Any Name and Address Put on the Knife.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

law they must, one and all, put their shoulders to the wheel, or it cannot be made to revolve.

Following the suggestions of our good friend, Hon. N. E. France, it is necessary that all bee-keepers of Illinois who are interested in the enactment of a foul brood law, address a letter on the subject to the Executive Committee of the Illinois State Bee-Keepers' Association (through the secretary at Bradfordton), stating the approximate number of colonies in their county; the amount of honey produced in a favorable year, and its value; how many persons are partly, and how many totally, dependent upon bee-keeping for a maintenance; what you know about foul brood and its ravages, etc.

Let every bee-keeper in the State pile up just such letters before the committee as will have the desired effect upon the legislature; and in addition let every bee-keeper make a special request of their Representatives that they favor such a law.

If bee-keepers throughout the State will follow this request, it will save the expense to an empty treasury of further postage, which we would be compelled to call on bee-keepers to furnish, and those who have had foul brood in their apiaries would be the first to respond. So do it immediately, and let's have the law. JAS. A. STONE.

Bradfordton, Ill.

Good Year and Honey Fine.

This has been a good year. The honey is fine. I am getting $3.25 per case for No. 1 amber, and $4.25 per case for fancy white comb. Congratulations and best wishes for the American Bee Journal.

ERNEST W. HALSTEAD.

Jackson Co., Miss., Nov. 22.

Poorest Season in Eight Years.

My report is a poor one. I had 10 colonies, spring count, and have four now. The neighbors sprayed their fruit-trees and killed my bees till I had six. I have been doubling them up, and have two colonies that I think will pull through, and two that are in poor condition. This has been the poorest honey-year since I have kept bees—eight years; I did not get a pound of honey this year. Prospects are good for next year. W. M. DANIELS

Wood Co., Ohio, Nov. 22.

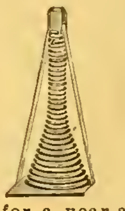
Convention Notices.

New York.—The tenth annual meeting of the Ontario Co., N. Y., Bee-Keepers' Association will be held in Canandaigua, N. Y., Dec. 8 and 9, 1898. An interesting program is in course of preparation. All interested in bees or bee-keeping are invited to attend.

Bellona, N. Y. RUTH E. TAYLOR, Sec.

Ontario.—The annual meeting of the Ontario Bee-Keepers' Association will be held in Guelph, Dec. 6, 7 and 8, 1898. Owing to the Guelph Fat Stock Show, the Guelph Poultry and Pet Stock Show, and the Experimental Union meeting on the same dates, there will be a large meeting of bee-keepers, and each association will be a help to the other, as many are interested in all the different meetings. All are cordially invited to attend the meetings. W. COUSE, Sec.

Streetsville, Ont.



Queen-Clipping Device Free

The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

GEORGE W. YORK & CO.,
118 Michigan Street, - CHICAGO, ILL.

What Others Think

Of the Bee-Keepers' Review.

MY BEE-KEEPING FRIEND:—If you really knew how good a journal the Bee-Keepers' Review has become, you would soon be one of its subscribers. It is my honest belief that in calling your attention to its merits, I am doing you (as well as myself) a *real benefit*. One way in which I can do this is by allowing you to see what others think of it. During the past year I have received hundreds of letters praising the Review; and from them I select the following:

The Review was never quite equal to what it is now. I was just glancing over a bundle of letters when my eye took in the last number of the Review that the clerk had laid on the desk. The letters were immediately put down and the Review taken up. After I had glanced through it pretty thoroughly the questions came to me, "What makes the Review so crisp, and why is it that I take it up so quickly when it comes? Is it because the editor quotes very largely from Gleanings in his Extracted Department? No, not exactly. altho that is a delicate compliment to Gleanings, it is because the editor throws his whole being into his paper. He loves it and his readers.—E. R. Root, editor of Gleanings.

Under the keen competition which now obtains among high-class periodicals, any markt degree of success comes only to the publisher of peculiar adaptability. The uninterrupted progress of the Review may be attributed to a rare combination of the qualifications possest by its editor and publisher, so essential to upbuilding of a popular, bee-keepers' magazine. An active mind, ever vigilant in behalf of its patrons, backt by mechanical genius and mature experience in the apiary, together with a clear, pleasing style of expression; modest, yet unaffectedly dignified and business-like; with a most delicate conception of the beauties of Nature and harmony in art, cannot but be productive of a work most gratifying to the cultured tastes which spring from that sublime conception of Nature which is an inherent part of every true bee-master.—H. E. Hill, editor American Bee-Keeper.

Dear Hutchinson, I have been intending for some time to write you my appreciation of the Review, but this has been an exceptionally busy season with us, and the writing has been put off until now. Permit me to congratulate you on the splendid journal that you are making. When you started out with the eight extra pages I had my apprehensions as to your being able to keep them filled with the interesting matter for which the Review has been so generally noted, but I am pleased to notice that there has been no deterioration. Your correspondents are the best apiarists of our land; and nearly all of the new thoughts and ideas in apiculture come to us now through the Review. With the best of wishes for your success. I am, yours truly, R. B Leahy, editor of the Progressive Bee-Keeper.

I suppose publishers are like ordinary mortals in that they appreciate words of commendation from the reading public to which they cater; therefore, I beg to say, I like the Review, and here are some of the reasons why I like it:

First.—Because it is well edited.

Second — Because it is well printed on good paper.

Third. — Because its contributors are among the best writers on bee-culture in America.

Fourth.—Because it has no fads.

Fifth.—Because it has high ideals of literary style and at the same time tries to be helpful to practical bee-keepers.

Sixth —Because I like its editor and count him among my warm personal friends.—Eugene Secor, Manager U. S. Bee-Keepers' Union.

As I have said before, once a really *good* bee-journal visits a bee-keeper a whole year, it usually becomes a permanent member of his family; and, for the sake of getting the Review into the hands of new readers for this "first year," I am making the following offer:

Send me $1.00 and I will send you twelve back numbers, the Review for the rest of this year *and all of next year*. The sooner you subscribe the more you get.

W. Z. HUTCHINSON, Flint, Mich.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Nov. 19.—Our market is very strong at 13c for best grades of white comb honey, with good No. 1 at 11 to 12c; ambers range from 8 to 11c. according to appearance, quality and flavor. Extracted, white, 6 to 7c; amber, 5 to 6c; dark, 5c. Beeswax, 27c. All grades and kinds of honey are salable at this time R. A. BURNETT & CO.

San Francisco, Nov. 2.—White comb, 9½ to 10½c; amber, 7½ to 9c. Extracted, white, 7 to 7¼c.; light amber, 6¼ to 6½c. Beeswax, 24@27c

There is so little extracted now offering that it is hardly quotable in a wholesale way. Comb is in fair supply and is being very steadily held, altho with the demand for same almost wholly local, the movement is not very rapid.

St. Louis, Sept. 9.—Fancy white comb, 12 to 12½c.; A No. 1 white, 10 to 11c; No. 1 white, 9 to 10c.; dark and partially-filled from 5 to 8c, as to quality. Extracted in cases, No. 1 white, 6 to 6½c; No. 2, 5½c; amber, 5c; in barrels, No. 1 white, 5½c; amber, 4½ to 5c; dark, 4 to 4½c. Choice Beeswax, prime, 24c; choice, 24½c. At present there is a good demand for honey. WESTCOTT COM. CO.

Kansas City, Sept. 9.—Fancy white comb, 12@13c; No. 1, 11@12c; amber, 10@11c. Extracted, white, 5½@6c; amber, 5@5½c; dark, 4½@5c. Beeswax, 22@25c.

The receipts of comb honey are larger.
C. C. CLEMONS & CO.

Boston, Sept. 30.—Our honey market shows a decided firmer tone since our last. A few sales have been made at 15c for an extra fancy lot, while almost all sales ranging from A No. 1 to fancy now are made at 14c, while occasionally, something a little off, will bring as low as 12½ to 13c. We do not look to see any lower prices.

Extracted, Florida, in barrels, mostly 6c to 7c, with a good demand. Beeswax, slow sale at 26c for best. BLAKE, SCOTT & LEE.

Indianapolis, Oct. 3.—Fancy white comb honey, 12 to 12½c; No 1, 10 to 11c. Demand fairly good. Tar-colored comb honey, 8 to 9c, with almost no demand. Clover and basswood extracted honey, 6½to7c. Beeswax, 25 to 27c.
WALTER S. POUDER.

Milwaukee, Oct. 18.—Fancy 1 pounds, 12½ to 13c; A No. 1, 12 to 12½c; No. 1, 11 to 12c; No. 2, 10 to 10½; mixt, amber and dark, 8 to 9c. Extracted, white, in barrels, kegs and pails, 6½ to 7c; dark, 5 to 5½c. Beeswax, 26 to 27c.

This market is in good condition for the best grades of honey, either comb or extracted. The receipts of the new crop are very fair, and some of very nice quality. The demand has been and continues to be very good, and values are firm on fancy grades and straight, uniform packing. A. V. BISHOP & CO.

Columbus, O., Nov. 18.—Market somewhat easier. Quote: Fancy, 14c; No. 1, 12c; No. 2, 10c; amber, 9c; buckwheat, 8c.
COLUMBUS COM. AND STORAGE CO.

New York, Oct. 22.—Receipts of comb honey are large, and there is quite a stock now on the market. While white is in good demand, buckwheat and mixt seem to be somewhat neglected, and quotation prices have to be shaded in order to sell in quantity lots: We quote:

Fancy white, 13 to 14c; No. 1 white, 11 to 12c; amber, 10c; mixt and buckwheat, 8 to 9c. Stocks of extracted are light of all kinds. Demand is good at following prices: White, 6 to 6½c; amber, 5½c; dark, 5c. Southern, in half barrels and barrels at from 55c to 60c a gallon. Beeswax dull at 26c.
HILDRETH BROS. & SEGELKEN.

Detroit, Oct. 20.—Honey in better demand and better prices as follows: Fancy white, 13@14c; No. 1, 12@13c; fancy dark and amber, 10@11c. Extracted, white, 6@7c; dark, 5 @5½c. Beeswax, 25@26c. M. H. HUNT.

Minneapolis, Oct. 20.—Fancy white clover comb is now selling at 11@12c.; amber, 10½c. Extracted fancy white clover, 5½c.; amber, 4¾@5c. Dark grades, both comb and extracted, not wanted at low prices.
S. H. HALL & CO.

Buffalo, Nov. 25.—A most excellent demand continues for strictly fancy 1-pound combs at 13 to 14c. The usual so-called No. 1, 11 to 12c; lower grades move well at from 9c down to 7c; stocks very light in our market. Extracted honey, 5 to 6c. Beeswax, 24 to 28c.
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Remember that, in order to secure any one of these three papers, in combination with Gleanings, the money must be paid in advance, and arrears to Gleanings, if any, squared up. These offers are very low, and will be withdrawn soon.

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38th Year. CHICAGO, ILL., DECEMBER 8, 1898. No. 49.

MASSACH... AGR...

CONTRIBUTED ARTICLES

Moving Bees to the Basswood Bloom.

BY G. M. DOOLITTLE.

A correspondent writes me that he wishes to fix during the winter, for moving his bees some 10 or 12 miles to where there is plenty of basswood timber, he having none nearer than that to his bees, hoping thereby to receive a larger amount of honey from his apiary than he would by allowing it to remain in one place, as he has formerly done; and he wishes me to tell through the columns of the American Bee Journal what I think of the idea. He also wants to know if there are any seasons when basswood blossoms in profusion, when there is no nectar secreted in the blossoms; and finally asks if the blossom-buds are not formed on the trees a little previous to the time of their opening, so that he can tell whether there will be enough prospect of bloom to pay him for moving his bees.

I have often wondered why more people did not think of moving their bees to the basswood flow, when they were so situated that such flow was beyond the range of their bees' flight, for I can see nothing against such a course, except the expense. From the experience of the last 30 years, I believe basswood to be one of the greatest honey-producers in the world, if not *the* greatest. I have secured a yield of 22 pounds of honey a day from it for three days, and reports of 20, 15 and 10 pounds daily have frequently been reported from this source during a series of days, while this beautiful tree was in blossom. If I mistake not, no such yields have been reported for any length of time from any other honey-producing plant or tree, altho there may have been reports of 20 pounds from other sources for a single day.

Where bees can be moved to the basswood and returned, at an expense of $1.00 per colony, it will be seen that 10 pounds of honey from each colony will pay the cost, counting honey at a reasonable figure, if they should secure that surplus in sections. By going back over my diary, kept during the time I have kept bees, beginning with the year 1869, I find that my average from basswood has been not far from 45 pounds of comb honey per colony each year. So if we call 45 pounds what we may expect one year with another from basswood, and if it costs 10 pounds of that for moving the bees to the basswood, we shall have 35 pounds left for profit; or calling the honey at 10 cents per pound, as above, it would give us $3.50 per colony as clear money on each colony, over what we should have had if we had not moved them. Thus we see, if we move 100 colonies we shall have $350 free of all expense for our undertaking, which is no small or mean sum.

Taking up the next part of the matter presented by our correspondent, I will say that I never knew a season when basswood did not furnish some honey. The shortest season that I ever knew gave a three days' yield, in which honey was so plentiful that the bees could not prepare room fast enough to store it, with a gradual tapering off of two days more, making five days in all. The longest gave a yield of 25 days, with three of them so cold that the bees could not work, except a little in the middle of the day. The State of the atmosphere has much to do with the secretion of nectar in the basswood flowers. The most unfavorable weather is a cold, rainy, cloudy spell, with the wind from west to northeast. If basswood came at a time of year when we were liable to have much of such weather, there might be such a thing as an entire failure of honey from it. But, as a rule, we have very little such weather at this time of year.

The condition the most favorable for a large yield of nectar is when the weather is very warm and the air filled with electricity. At times when showers pass all around, with a great display of lightning, yet no rain falls in our immediate vicinity, the honey will almost drop from the blossoms; and even when light showers are present nearly every day, I have known bees to store honey very fast. At these times of greatest yield I have seen nectar in the blossoms after they have fallen to the ground, so that it sparkled in the morning sunshine.

Then, this nectar is nearly the consistency of honey, and not like sweetened water, as in clover, teasel, buckwheat, etc., which makes basswood doubly valuable over most other honey-secreting plants and trees. One bee-load of nectar from basswood in a dry, warm time is equal to three from white clover or buckwheat, or five from teasel, and some of the other honey-producing flowers. I have taken two or three stems of basswood blossoms, when the yield was great, and jarred them over the palm of my hand, when I could turn two or three drops of nice honey out of the hand.

All of these things point toward a success in moving bees to a basswood locality, above what it would be to try to do the same when other blossoms were to be the source from which honey was to be secured.

Replying to the last question, I will say that the fruit-buds and leaflets of all trees with which I am familiar are formed in June and July of the preceding year; so the result of next year's honey-yield, so far as buds and flowers are con-

Prof. Lawrence Bruner.—See page 772.

cerned, is assured nearly or quite a year previous to their expanding. After being formed they remain dormant till the warmth of the next spring brings this dormant life into growth. As soon as the buds unfold, the latter part of May, then we can see and know whether we should move the bees or not.

By examining closely, as soon as the buds unfold so that we can see the minature leaves, we can find the bunch of basswood buds at the base of each tiny leaf, curled up and looking very much like a small, fuzzy worm. With each week this bunch of buds grows, until at the end of about seven weeks from the time the trees put on their green in the spring, they open their flowers, filled with nectar to invite the bees to a sumptuous feast.

Of course, a cool season will retard the time of blossoming a little, and a hot season advance it; but the above is the rule.

Thus the practical eye can tell nearly two months in advance as to the promise for a yield of basswood honey, as far as blossons are concerned; and no bee-keeper should consider that he has gone beyond the stage of "swaddling clothes" till he is familiar with all of these things, the knowledge of which goes to make up the "full statured" man or woman in this fascinating pursuit.

Onondaga Co., N. Y.

⁂

Rendering Wax from Honey-Cappings.

BY J. K. DARLING.

I have read the question by "Jamaica," on page 725, also Dr. Miller's reply, and it appears to me that I might help a little with these difficulties. As Dr. Miller says, I believe a large solar extractor would suit better than anything else, but that is not quite enough to get *all* the wax, altho it will take out the wax as clean or cleaner than any other process I know of without applying pressure.

If "Jamaica" will get a properly-constructed solar extractor and manage it rightly, he will not be bothered very much with flying bees, and will obtain a good grade of honey that some of his customers will prefer to that taken with the honey extractor, for altho it may be preceptibly darker, it is very heavy in body, and of good flavor; and he will also obtain a grade of wax that he need not be afraid or ashamed to place in competition at any of the fairs, and no need to remelt or clarify it, either, as the extractor "is so constructed that it will at one operation effectually separate wax, honey and refuse," and there is no need for the honey and wax to go "into the first receptacle until it is filled, and overflows into the second, and that into the third, and so on," as there is only one pan for both honey and wax in which they separate themselves. The refuse never gets there. I have one that I made for myself, modified after the style of one known as the "Alpaugh Extractor," and I would not take $25 for it, if I could not make or buy another.

I am not bothered with too much heat here on the 45th parallel, but on the contrary I am bothered at times because I do not have heat enough, altho the lid is double glass, ½ inch space.

If one wishes to save *all* the wax, it will be necessary to have some kind of a press to take the wax out of the refuse, as I do not believe that any steam extractor, or solar extractor, or hot water process, will take the wax *all* out of the refuse without pressure. I believe that one of our most wide-awake and progressive bee-keepers, Mr. F. A. Gemmill, has constructed a press that as an adjunct to the solar extractor will leave little to be desired, and it does not work inside a vessel containing hot water, either, if I understand the description.

I may say that my first prize wax for the last two seasons was from the solar wax extractor without remelting, and I did not see any better at the Industrial Exposition at Toronto, or the Central Canada at Ottawa.

Lanark, Co., Ont., Canada.

⁂

No. 5.—The Care of Bees for Wintering.

BY C. P. DADANT.

I believe the question of shelter, in out-door wintering, is of more importance than generally believed. Tho it is true that in some instances, colonies have been known to winter safely, when exposed to the fierceness of the winds, these exceptions, instead of weakening the rule, can only strengthen it, for it will always be found that the circumstances otherwise were most favorable, where the results were so unexpectedly good.

In a natural state, the bees which are hived in hollow trees can hardly be used as a safe criterion, for we have no manner of knowing how many or how few such colonies winter safely in this climate, but even if it could be proven that they generally succeed, the fact that their abode is usually at only a short distance from the ground, and in thick timber, where the force of the wind is lightly felt, and the additional fact that the body of the trunk which they inhabit is very thick, much thicker than our improved hives, would still indicate that some shelter is advisable. The straw hives formerly used by the old apiarists of Europe were certainly very good abodes, as far as winter protection was considered; for they were very thick, and the material used is one of the best non-conductors of heat or cold. But it is out of the question to make such hives to-day, or at least to put them in use in a practical way; so we must see what we can do with the ordinary movable-frame hives.

Double-wall hives are very good for winter, especially when they have a dead-air space between the two walls. They are exposed to two weighty objections. The first is that, in the warm days, or in early spring, they are not readily and quickly warmed by the first rays of sunshine, and the bees in them will be less readily induced to take a flight. The othe defect is their cost. Few bee-keepers will adopt them because of the expense involved in the purchase of such hives. This objection should have no weight with a practical man, who will readily figure that the first cost of a hive is a trifle, when he considers the time of its usefulness, which may be reckoned, if the hive is well made and well painted, not less than 30 years. But, since most of our apiarists have only single-walled hives, it is useless to spend much time in the consideration of anything else.

A bee-house, if properly made, built as a shed, with a roof and three sides closed for winter, would be an ideal wintering-place, especially if the front could also be closed during stormy days, and the hives more or less packt in straw, leaves, etc. But a bee-house for a large apiary is almost out of the question, and it is only in small apiaries, or in cities, that they are used.

A tight board fence is a good shelter, as far as it goes, especially if on the north side of the apiary. A movable outer covering, made so as to fit over the hive, and arranged so it may be taken to pieces and piled away for summer is very good. It may be made of rough boards, or of thin lumber, to be more easily handled when removed. But it must be so arranged as to permit of the bees' flight during warm days, as said before.

It would be a big error to place the bees in any repository, or to cover them with any shelter which prevents their flight, unless the temperature of such repository is kept evenly at the point which would enable them to remain inactive with the smallest possible consumption of stores. That is why the placing of bees in garrets, or enclosed sheds, where they are certainly warmer than out-of-doors, but where the temperature nevertheless falls much below the freezing point, or rises, in warm days, so as to make them restless, has always been an entire failure.

Our method, which is perhaps not the best of all, but which has always given us very good results, is to place around each hive, on all sides but the front, a packing of forest leaves, held in place with a sort of lattice work made of plasterers' laths and strong twine. The laths are cut in two, so as to make about the height of the hive. The leaves used are found right in the apiary, and simply raked together; and when they are thus closely folded around the hive they give it a very cosy and comfortable appearance, especially when the cold winds blow. The front being left uncovered, the bees can take advantage of any sunshine to take flight, and no particular attention need be given them, except to see that the consecutive thawing and freezing of the snow does not close the entrance and prevent the circulation of air.

A shelter of loose snow, as I said before, is a very good shelter until it begins to thaw, when it is objectionable, especially if the thawing snow fastens to the hive, and refrigerates it, so to speak, by the natural absorption of heat to change to water.

In the hive, over the frames, we always use a straw-mat made of course straw, or slough-grass. This, with a cap full of leaves, allows the moisture arising from the bees to readily escape without any deperdition of heat; and places them in the very best possible condition at least possible cost.

The use of leaves as shelter was suggested to us by the oft-repeated remark that leaves are very good to keep the ground from freezing. Any one who has had to dig the ground in the timber in cold weather has noticed how little the ground freezes under a plentiful coat of leaves.

In another article I will examine the question of cellar-wintering.

Hancock Co., Ill.

CONVENTION PROCEEDINGS

UNITED STATES BEE-KEEPERS' UNION.

Report of the 29th Annual Convention Held at Omaha, Nebr., Sept. 13-15, 1898.

DR. A. B. MASON, SEC.

SECOND DAY—AFTERNOON SESSION.

[Continued from page 757.]

SELECTING TIME AND PLACE OF NEXT MEETING.

"Wouldn't it be a good plan to have our next meeting in Philadelphia, at the time of the next G. A. R. meeting?"

Dr. Mason—The constitution puts the time and place of holding these meetings into the hands of the Executive Committee.

Dr. Miller—I move that we request the Executive Committee to appoint the next meeting in Philadelphia, during the G. A. R. meeting.

A letter was read, signed by Arthur Williams, Secretary of the Denver Chamber of Commerce, inviting the Union to hold its next meeting in Denver, Colo. Also, a letter was read from the Citizens' Business League of Milwaukee, Wis., requesting that the next meeting of the Union be held in that city.

Dr. Miller—I renew my motion that the Executive Committee be requested to appoint the place of the next meeting at Philadelphia, during the next G. A. R. meeting. I may say that I am more in favor of meeting at Denver than at any other place in the Union. There are personal reasons for my preference, but I don't believe it is the best thing for the Union. I believe that the one thing to be considered above all others in selecting our place of meeting is the question of railroad rates. I believe that the best thing we can do is to follow the Grand Army. We are then sure of getting low rates, and we cannot be sure of them in any other way.

Dr. Miller's motion was seconded by Dr. Mason.

Mr. Stilson—We have no written invitation from the people of Philadelphia to follow the Grand Army to that place. I don't like the idea of following around as a side-show with those big meetings; therefore, I move to substitute the word Denver instead of Philadelphia. I think with the aid of the Denver Chamber of Commerce we will get as good rates as we can East.

Dr. Miller—May I ask if as good rates were secured this year to the West as would have been secured to Cincinnati?

Dr. Mason—Not by a considerable. I do not see why we cannot hold the meeting in the East, and save bringing the members over all the roads they would have to travel in coming to the West.

Mr. Rauchfuss—We have a lot of bee-keepers in the West.

Dr. Mason—If you could see the letters I have received from those who could not be here because the railroad rates prohibited it, you would think seriously of this matter of reduced rates.

E. R. Root—They have a flourishing bee-keepers' association in Philadelphia. I will guarantee that we will receive a most royal welcome from those people.

Mr. Danzenbaker—If this meeting had been held at Cincinnati this year, we would have had a larger attendance than we had last year at Buffalo. I do not prefer Philadelphia over Denver, but if the Grand Army was to meet here next year, or at Denver, I would say go with it for the sake of the reduced fare. If you want a large attendance, that is the way to get it.

Mr. Scott—I second Mr. Stilson's amendment. I will say that I don't think any people in the United States can extend a more hearty invitation than the people of Denver.

Dr. Miller—These Westerners are aggressive, and they fight to the last minute to have things come their way; but if you simply wipe that all aside, they will take it in good part and come around all right. I don't believe in giving way to them on this matter—not an inch. If you follow the Grand Army, you get the rates and get the attendance, and that is the whole story.

Mr. Stilson—Since you went to Lincoln two years ago, I have heard no kicking about your hotel rates and the accommodations you received there; but ever since you went to Buffalo, following the Grand Army, I have heard every last man telling what poor accommodations he had and what he had to pay for them.

Dr. Miller—We were never treated better than we were in Lincoln; but that is not exactly the question now.

Mr. Rauchfuss—So far as rates are concerned for Denver, I could assure you low rates from the Missouri river; but I could not assure you anything beyond the Missouri. During the first part of October we have our Mountain and Plains festival, and from all Missouri river points we have very low rates.

E. R. Root—We have been in the West three times lately—once at St. Joseph, once at Lincoln, and here; and to go next year to Denver it seems to me would hardly be fair to the East. We haven't been in the extreme East since we were in Washington, in 1892. It would be nothing more than fair to show our appreciation of the Eastern bee-keepers. The matter of rates is an important thing. We had a very large convention, and a very good convention at Buffalo.

A vote upon the amendment of Mr. Stilson to the original motion, substituting Denver for Philadelphia, resulted: Yeas, 19; nays 15.

Pres. York—We will now proceed to vote upon the original motion, as amended.

Dr. Miller—The question now is on the original motion. You will understand very clearly that wherever the meetings are held, there will be a majority of the people of that region in attendance. At one time we had a very earnest discussion over the matter of the place of meeting. The matter was in very much the same condition as it is here, and I said at that time, "If you want to kill the association, and have it become merely a local organization, do just what you are doing; but if you want to have it continue as something that belongs to the United States, then you must treat other localities fairly." The majority of those who are here probably found it more convenient to come here than they would have found it to go somewhere else, but because you have the thing in your hands, if you vote to have the meeting held in the West again next year, you might as well kill it. As I said before, personally, I want to go to Denver, and I would give $5 to have it at Denver to every dollar I would give to have it at Philadelphia, but I don't believe that is the thing for the Bee-Keepers' Union to do.

Dr. Mason—This very thing was had in view when the constitution was gotten up. At that time we were partially pledged to go to Lincoln. At Toronto we had voted to go there, and the matter was left in the hands of the Executive Committee. If you propose to tie their hands in this way, the matter might just as well be taken out of their hands altogether. I move that this whole matter be laid upon the table.

The motion of Dr. Mason was seconded and carried.

FULL-GROWN LARVÆ IN COMBS ON TREES.

"Is it a common occurrence to find nearly full-grown larvæ in combs formed on limbs of trees?"

A Member—No.

Dr. Mason—I think it would depend on the limb—on its location and size, etc. I have had a comb built on the bottom of a hive, and it was filled with larvæ.

Prof. Bruner—This was a case where small combs were built on the limb of a tree out in the woods, and eggs had been laid and the eggs were hatcht, and the larvæ were nearly full grown.

GRANULATION OF HONEY IN THE BROOD CHAMBER.

Mr. Whitcomb—Why does honey granulate in the brood-chamber, and how can it be prevented?

Dr. Mason—Last fall I was prevented from attending to my bees promptly, so that some of the surplus was left until October, too late to extract. I set the frames away and tried to extract some in the winter, but the honey had become so much granulated by that time that the extracting wasn't a success. Last spring the bees used a larger amount of honey than usual, and I thought I would try the experiment of feeding them this granulated honey. Out of about 300 pounds of honey that was mostly granulated in brood-frames, they didn't waste 5 pounds. Some way they used up all the granulated honey. I can't tell you how. The granulation was rather soft. Sometimes there would be a little that was exceedingly hard in places, but aside from that they used it up.

Prof. Lawrence Bruner, of the Nebraska State University, Lincoln, Nebr., then delivered the following address, on

The Bees in America.

I have been assigned a subject upon which, if I should follow it exactly as it reads, it would have been impossible for me to have said anything, for the simple reason that we are not equipt with sufficient literature in the library of the University of Nebraska to enable one to hunt out matter and write an historical paper on "Bees in America," if we confined ourselves to the honey-bee. While I have not prepared a paper on the lines that you probably expected, I would say that I have had considerable experience in squirming and still remaining where I was. I have been able to get some notes together on bees in America, and still not include all of America. Since meeting with you two years ago, in Lincoln, I have spent one year in South America. Now, I do not intend to speak about the bees of South America, still, South America is a part of America. Neither do I wish to include Central America or Mexico, but I shall confine myself to the bees of America north of the Mexican boundary. In speaking of the bees of America north of this boundary, I shall ignore the honey-bee entirely. I know that most of you are aware that we have other bees besides the honey-bee. As an entomologist —a student of bugs and other insects—I treat all alike. I try to know something about each kind and its mission in life.

Among the different kinds of insects that we find in America north of the Mexican boundary there are about 1,000 different kinds of bees, other than honey-bees, and on that line of bees I expect to say a few words this afternoon. These other bees visit blossoms just as the honey-bee does, and possibly for the same purpose. It is a part of their mission in life to visit flowers and select pollen from them. These 1,000 or more kinds of bees that are found in America north of the Mexican boundary are clast by entomologists into two distinct families. Those families differ one from the other in some minor characteristics which the ordinary person need not know. Suffice it to say that the members of both families are fond of sweets, and they find the best of those sweets in the blossoms of plants. It is a part of the mission of bees in life to visit the blossoms of plants, carrying pollen from one to the other, and in that manner fertilizing the blossoms.

I have often been askt as a teacher of natural history, what is the use of insects in this world? The ordinary person is apt to imagine that anything that is not directly useful to that particular person, has no use whatever in this world. There is not a thing that is created in vain, we are told, and I think that the naturalist knows this perhaps better than anybody else, for he makes it his business to follow out the life-habits and movements of these creatures in the world about him.

Some of these insects are equipt very much as the honey-bee is for gathering both nectar and pollen from the plant, and others are equipt for gathering the pollen solely, while still others are equipt for gathering the honey simply. Some of them use the pollen as food for themselves to a certain extent, but for food for their young almost entirely; some use honey and pollen combined as food for their young; none of them use honey exclusively as food for their young. These wild bees are some of them social, but most of them are solitary, or live in pairs. Some of these bees, like the bumble-bee, gather honey and store it. This honey is not used by the mature bee as food to any great extent. If we open a bumble-bee's nest, we find an aggregation of large leathery cells of which some are filled with honey and others with pollen, or a sort of yellowish, brownish paste. They use this food for their young, as the honey-bee does. They will take some pollen and mix it with honey, and have the proper food for their young. The bumble-bee is found with males and females; in some instances they have workers also, or those that do the office of workers. They are simply smaller females, perfect, and not like the workers of the honey-bee.

There is a great variation in the structure of the legs of these different bees. If you will notice these pictures [pointing to certain figures upon charts displayed before the convention] you will observe this variation. These pictures represent only a very small percentage of the variation that is found to exist in the hind legs of the bees. These variations are to serve the purpose of gathering and carrying pollen under different circumstances. Some, instead of having the legs fitted for carrying pollen, have the lower side of the abdomen furnisht with a brush for carrying the pollen-grains. Some bees are without pollen-baskets. That would indicate to the entomologist that the bee is a parasite. We have parasites among bees, and they are useful in some ways. They are not useful to the bees upon which they are parasitic; neither are the parasites of the human being useful to men; still, the parasites among the bees are useful in other ways. Every one of those collects a certain amount of honey for itself in passing from one blossom to another, and carries a certain amount of pollen with it, and therefore is engaged in the cross-fertilization of the plants.

Bees are the fertilizers of plants. As flowers are so varying in their structure, and so different in size, it becomes necessary to have insects adapted to carrying the pollen from one to another. The insects must have different forms and be of different sizes; for that reason we can see very easily why we have so many different species of bees. The genus Andrina —we have a representative of it here—that one genus in North America is represented by over 300 distinct species. We have one species of honey-bee in this country, and two in Asia. The species of the genus Andrina are usually found early in the year, when the honey-bee is not out, or in such blossoms as the honey-bee does not work. One will visit one blossom, another will visit another blossom; some visit the violet, some visit the blossoms of one tree and some another tree, and they have obtained their specific names from the plants they visit. Suppose one species works on the plum-tree; we call that Andrina prunus; the next would be named after the violet, on which it works, and so on. We know pretty nearly what bee fertilizes each of the wild trees. Some of these have exceedingly long tongues, and can work on clover and very deep blossoms; but few of that kind can ever work on alfalfa and red clover.

In this country we are not troubled as they were in Australia about getting the fertile seed of the clover, because we have a leaf-cutting bee. Some of the apiaries they make for themselves are made in the earth, others in wood, others in the stems of plants. Some make earthen cells and plaster them on the under sides of stones, and have them lined with leaves. If you unwrap those little bundles that are there, you will find the egg and the food, and a little later you will find the young grub or worm. These leaf-cutting bees cut out of the leaves of various kinds of plants little semi-circular pieces; hence they are called leaf-cutters. They do not gather honey, as I said before. There are probably 150 to 200 kinds of leaf-cutting bees found in America north of the Mexican boundary. Some are nearly as large as the worker bumble-bee, while others are so small that the house-fly would be large in comparison to them. All have the same general habit, but they visit different flowers. As a rule they have long tongues and visit deep blossoms. The thistle is one of the plants they visit. One genus of these leaf-cutting bees is possest of very bright colors. They have a bright, metallic, blue body, or green, or green and red, all bright metallic colors. A collection of those bees is very beautiful to look at; but to know something about their habits is much more delightful.

I cannot dwell upon each one of those genera, or each one of those groups, because we have over 50 different groups in which these wild bees are placed: some of the groups, like Andrina, contain 100 to 300 species each; others, like Bombus, contain 40 or 50 different species. Since the last talk I gave on this subject, there have been several species of bumble-bees found that are entirely new. It is a good thing that we as bee-keepers study the habits and know something about the wild bees, and know that if the honey-bee was not present in the region in which we are, nature would still be cared for and the work of nature would be carried on to a certain extent by the native bees of that region. And I want to say right here that none of our wild bees have learned to properly fertilize our fruit-trees. Our principal fruit-trees are an importation from the old world; the honey-bee is an importation from the old world, and the honey-bee has learned its work of fertilizing those fruit-trees in the old world, and knows how to do it in the new world; so we must have the honey-bee with us if we wish to have fruit.

Some of our bees are extraordinary in their make-up. The honey-bee is just an ordinary kind of a bee in its make-up, and in its general appearance. Studying these wild bees we find some in which the hind legs are excessively enlarged and much contorted. Some of those contortions might have been shown in these illustrations, but I don't happen to have them. In some the first joint of the foot is much larger than all of the leg put together, and is covered with hookt spines, or long hooks or knobs of various kinds. They serve some special purpose, doubtless, which does not exist in the case of the others whose legs are not so specialized.

There is one thing concerning the wild bees that I may be wrong about: Some one visited me and said there was a wild bee that came to his apiary every year and robbed his own bees. I said it was probably the ordinary black bee, but he said it was not, because he had both the black and Italian bees in his apiary, and knew them well; he said that the robber was a much smaller bee. I told him I didn't think any of our wild bees would be guilty of doing any such thing, that it must have been some bee that had been associated with man for a long time to learn the habit! Now I want to ask some of you who are here, and who have had more experience, whether any of you have seen wild bees of that kind—bees of that description that came to your apiaries and carried off honey.

Mr. DeLong—Out in my country I have observed groups of small, dark-striped bees that weren't any larger than a house-fly. They were along the hedge-fences, and were in numberless swarms—sometimes thousands in a swarm. I wondered where they came from, and when I got to work extracting my honey I found a considerable number of them dead in the hives; but I didn't find them carrying away honey. When I was extracting they came and lit on the combs as I was handling them. They were little, black, slim, long fellows, with stripes around the body.

A Member—Is the yellow-jacket a bee?

Prof. Bruner—It comes pretty close to being a bee; it is one of the wasps. I was going to speak of the cuckoo-bee. What is meant by the cuckoo-bee is a parasitic bee. We have certain species among our wild bees that live upon the labors of other bees. The other bees make nests and carry a supply of pollen and honey and fill the brood-cells ready for laying their own eggs, and perhaps when there is just one more trip necessary to be made before the cell is completed and ready for receiving the egg, one of these cuckoo-bees will slip in and deposit an egg in the cell and get away before the rightful owner gets back. The bee that has constructed the nest will come back and deposit the last load of pollen and lay her egg in the same place. The cuckoo-bee's egg hatches first into a small grub, and eats the egg or the young larvæ of the bee that constructed the nest, and then goes on eating the food that was provided. We have probably 150 or 200 species of these cuckoo-bees.

The bees of the one genus are parasites upon the leaf-cutting bees; on the other hand there are certain other bees that live in the nests of the Andrina, and that are called Nomada, because of their habit of wandering around and laying their eggs in other bees' nests. This habit is much like the habit of the cow-bird, which lays its eggs in other birds' nests. Cow-bird eggs have been found in the nests of over 100 other kinds of birds. The other birds sit upon and hatch the strange eggs. In this same manner the cuckoo-bees are brought up by the industrious bees of other sorts that are willing to work. These cuckoo-bees have no pollen-brushes on their legs; they are not capable of carrying pollen themselves; if they wanted to carry pollen for nests of their own, they would not be able to do it, and so they must force other bees to bring up their young.

There are a great many other things in connection with the wild bees that I might bring up, and that would no doubt be interesting to you. If I were to carry the discussion of the subject into the tropical countries, I certainly could bring up something much more interesting than could be found in this country. But time does not permit. What I should like to impress upon you as bee-keepers is this: Try to devote just a little bit of time to the study of our native bees. I think you will find that study very beneficial in carrying on further work with the hive-bee. We find that there are a great many questions in connection with our work with the honey-bee that are not settled. Many of us who might take up this line of work are too busy in other directions. I am sorry sometimes that I have not confined my time to work upon the honey-bee; but I could not be a teacher of entomology if I had done that, because the teacher of entomology must know something about other insects as well as the honey-bee. Any one who has started out to study one particular branch of natural history has usually become so intensely interested in it that he has brancht out and taken up other lines as well. The naturalist, whatever part of the country he falls into, always finds something to interest him.

As I stated in the beginning of my talk, I have visited South America since I met with you last, and during that time I can assure you that not every one of my experiences was pleasant. Out of every 200 people in the Argentine Republic whom I met, I found but one who was able to talk my language, and so I had to try to speak the language of the other 199. Those people I found were not friendly to the United States, because they said we had a "Bill Dingley" up here, and they made it very disagreeable for me in every way possible. Some of them carried long knives, and if I had not been on the watch constantly they might have taken advantage of me. Those things were of course a little bit out of the line of pleasure. Still, I got out with Nature and enjoyed myself as I have never enjoyed myself before, and as I never expect to again.

In South America, while I collected insects only a couple of weeks, I think I collected something like 350 or 400 different kinds of wild bees, and none of those are identical with those we find in North America. I found one that builds its nest on trees down there and gathers honey. I do not know what it is. The cells in which the honey is placed are of the size of a small straw, and the honey is sour. The bee is of about the size of the house-fly, or a little smaller, and they sometimes make nests as large as a bushel basket, and the material they make the comb of is something between wax and paper. I expect to try to work out this insect and find out what it is. It has a sting. I don't think that any bee that gathers honey is stingless.

A. I. Root—A couple of our soldiers who have returned from Cuba informed me that they saw the natives getting honey from a stingless bee. They had pailfuls. They said the honey was dark-colored, almost as dark as tar. The natives were in the habit of going out into the woods and bringing in considerable quantities. They said they saw the bees at work. The cells were very much like the cells of bumble-bees. The bees alighted all over them, and they brusht them off. They didn't sting at all, but of course they fought for their honey; they would bite.

Prof. Bruner—It is a peculiar fact that naturalists never run across anything of that kind themselves, when they are out looking for just such things.

A. I. Root—The men rather admitted that they did not know that the pailfuls of honey came from the nests of the stingless bees. They saw the bees and the cells.

Prof. Bruner—There is an ant down in that country that we call the honey-ant that sometimes stores a very dark honey. It is the honey from plant-lice, and it is stored. Whether that would be the stingless bee or not, I don't know.

A. I. Root—We had some specimens of stingless bees in our apiary at one time. They did not gather honey. They came from Central America.

Prof. Bruner—While we have heard a great deal about things of that kind, it is peculiar that none of the naturalists who have collected in that region have ever run across the insects themselves.

PLANT LICE, HONEY-DEW, ANTS, ETC.

E. R. Root—I would like to ask a question in regard to plant-lice. Some six or seven years ago plant lice seemed to be quite prevalent, and during the lapse of time since we have seen little of them. During this season the plant-lice have made their appearance again, and honey-dew is scattered through a good deal of the honey. Is there any reason why they should do that?

Prof. Bruner—There are reasons, but we havn't found out what the reasons are. Usually in a wet spring and during the summer following we have those very conditions. We have comparatively little honey-flow during a wet season. During that time, and during the dry season following, the plant-lice increase much more rapidly than ordinarily, and the bees gather whatever they find, owing to the scarcity of honey.

Mr. Westcott—In our locality we have always had the honey-dew every year, but the bees don't work on it except when there is no other honey.

Mr. Hatch—Is there such a thing as honey-dew without the aphis?

Prof. Bruner—I do not think there is. The relation between ants and honey-dew is one of the most interesting things we find in the study of natural history.

Mr. Masters—During the last summer I found ants following the aphis from one tree to another.

Prof. Bruner—They were probably trying to get new feeding-grounds, for their eggs. I have known ants to carry the eggs of the aphis and store them in their own nests, and to bring them up and put them in the galleries that are built a half inch or so below the surface of the ground, where the sun could hatch the aphis' eggs. If a cold day came, the ants would carry the eggs down into the recesses of their nests. After the eggs were hatcht, the aphis would be carried up and placed along the roots of various kinds of plants, and take care of them in that way, all the time getting their reward in the honey-dew which the aphis yields. They are the ants' cows. The ants milk them. Some ants have certain kinds of plant-lice that always live underneath the ground, in the ants' nests; and the ants' nests are built along the roots of certain plants—some particular kind of aster, that the aphis prefers the sap of.

Dr. Miller—There is a certain ant that sometimes will burrow into the wood of hives and utterly honey-comb it. It is dangerous, because sometimes you don't know there is anything wrong, when the whole thing it utterly ruined and gone. Can you tell us any prevention or remedy?

Prof. Bruner—The best remedy would be to make your hive-bottom of iron. That is the termite that is so much spoken of in our books.

Dr. Miller—It is a large black ant.

Prof. Bruner—Salt will keep the black fellows away partly, but not entirely. They don't work except in rotten wood, as far as I know.

Dr. Miller—These will take sound pine wood and make burrows all through it.

Prof. Bruner—That is some ant that I don't know.

Mr. Westcott—I think kerosene will drive them entirely away. I have used it around in the apiary, and the ants would leave.

By a unanimous rising vote, the thanks of the Union were extended to Prof. Bruner for his interesting address.

The Secretary then read a paper by Mr. C. P. Dadant, of Illinois, entitled,

The Scientific Side of Apiculture.

Science is often said to be "theory," while "labor" is "practice," and many of our successful, hard-working men look down upon those whose mind is entirely turned to the scientific study of a subject without much regard for the practical side of it. The scientist is said to be "lazy," because he wastes valuable time in apparent loafing, that might be successfully employed in money-producing labor. It is true that he is always experimenting, trying new things, which fail oftener than they succeed. He spends hours, and days, and weeks, watching his bees flying in and out; he tries all sorts of hives, and never has two of the same shape; he wantonly destroys entire colonies in costly experiments; in short, he makes a "botch" of everything that he undertakes. But, after all, it is he who makes the progress, of which we take the benefit.

It was the scientific apiarist who found out that the queen was not a "king," but a mother, and that the drones were not the females, but the male bees. He discovered how the queen was reared, and how she mated, and how we could help Nature and rear queens artificially. He has taught us why a queenless colony did not succeed, and what could be done to save it.

He has discovered that the bee-moth was not the enemy of man's interest to the extent that was believed popularly, and that it was not much more to be feared than the house-fly; and he promptly showed us how to avoid its ravages among the hives.

It was he who discovered that what the bees carry home on their legs is not wax, but pollen, and that this pollen is necessary to the rearing of brood; and he has taught us how to supply this needed pollen artificially in seasons of scarcity.

It was he who discovered that comb was made out of digested honey, and not out of pollen; and that this comb is, therefore, the most expensive part of the habitation of bees. He has sought for means of returning this expensive material to the bee, after it had been melted up in an undervalued article of commerce, and he has finally succceeded in pointing to us successful methods of doing this.

It was he who found out that success in bee-culture could not be achieved until the entire hive was under the control of the apiarist; and he invented the method of having each comb hung to a separate frame, so that we might take our hives to pieces—"like a puppet-show." In this one particular alone there has probably been as much study and as many inventions, and brain-worrying trials, as on all the rest of the scientific study of bees put together.

It was the scientist, also, who ascertained and taught us that the drone is fit only for the reproductive function, and that we should avoid rearing it in large quantities; that the surplus consumed by the drones, in a state of nature, should be the share of the hard-working apiarist.

Is the work of the bee-scientist over? No, not any more in bee-culture than in electricity, or in farming. We might as well say that we have reacht perfection, and that nothing more remains to be learned. To increase production by new methods, to improve our bees by selection, to breed races with longer proboscis and greater prolificness, to produce red clover with a shorter corolla, so that our bees may derive profit from its plentifulness throughout the land, are a very few of the questions of the day.

But there are probably many improvements to be made, of which we do not dream any more than we dreamed of talking to our friends at the end of a wire, 40 years ago. Progress is so sudden and so unexpected in all things that it is quite probable that the next century will reveal as much novelty and as much advancement in our line as the past century has brought forth, and we may achieve in bee-culture as wonderful things, compared to the past, as have been achieved in other channels, through the discoveries of science.

C. P. Dadant.

[Continued next week.]

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Windbreak or Shelter for Bees.

I keep my bees in a yard near the kitchen where they are always in sight. But here is the trouble: Our house is on a small elevation, and the wind is blowing most of the time in the spring and summer, and I notice it interferes with their work a great deal. If I should move them to the foot of the hill they would be out of our sight most of the time, and within a few feet of the public road. I can move them 200 yards in shelter of some trees, or build a windbreak. Which is better? I have about 50 colonies. Washington.

Answer.—Without being on the ground so as fully to get the lay of the land, I should vote for the shelter of the trees. It's cheaper, more likely to stay in order, and will be a shelter not only for the bees, but the trees will be a fine shelter for the bee-keeper on hot days. Any windbreak that you make to be good for cold, windy times, will be likely to be uncomfortably hot for man and bees on still, hot days in summer.

Foundation in Extracting-Frames.

1. How shall I fasten the comb foundation in the shallow extracting-frames with a groove running in the center of the underside of the top-bar?

2. Which is preferable for such frames, starters or full sheets? Subscriber.

Answers.—1. Slide the edge of the foundation into the groove. If it does not go in easily, flatten the edge a little with the flat side of a case-knife, or by running a little wheel over it. A few drops of melted beeswax dropt here and there along the joint will hold it in place. A drop every two inches will be enough, providing that drop is attacht to both the wood and the foundation. A spoon with the end bent together will do to drop the melted wax, but the tin spoon described not long ago in the Bee Journal is better. You can use rosin and wax instead of pure wax for fastening the foundation, and it is perhaps a little better for that purpose, but it is not advisable to use it, for when the combs come to be melted up in future years it will be better to have no rosin present.

Sometimes no wax is used, the foundation being wedged in. Two grooves are made close together. Put the foundation in one, then put the little stick that acts as a wedge in the other, crowding it in pretty tight, and the foundation will be held firmly in place.

2. Most prefer full sheets. That secures worker-comb, and makes less temptation for the queen to go up and lay. Even if an excluder is over the brood-chamber, if drone-comb is above, the workers will often hold it empty for the queen to lay.

Reliquefying Granulated Honey—Queen-Rearing.

I saw an article in the Bee Journal about reliquefying honey after it is granulated. How is it done? We have been handling bees only about 18 months, and we are anxious to get all the light on the subject that we can. My husband is a railroad conductor, and the bee-business is mine to attend to. I take a great interest in the bees. I hive swarms and handle them all the time. We have 18 colonies, and take quite a lot of bee-literature, and try to inform ourselves, but I think experience is a good thing to mix along with book-learning. Then, I like good advice, too. Let me hear from you about the granulated honey, and about queen-rearing, and any good points that beginners ought to know. Texas.

Answer.—If you want to liquefy your granulated honey, all you need to do is to heat it till it melts. But like most things, there's a wrong and a right way to melt it. Heat it till it boils and it's ruined. Better not let it get above 150°. But you may not be able to tell easily just how hot it is, so you may take some plan by which you are pretty sure it will not get too hot without using a thermometer. Set it on the reservoir on the back of the cook-stove, and let it stay there till it melts clear. All the better if it takes several days. Another way is to set on the back of the stove a kettle or pan in which you can set the vessel that contains the honey. Set the outside vessel on the back of the stove and put on the bottom of it a bit of shingle or thin board and set on this the vessel of honey. Now fill up the outside vessel with hot water. The bit of board prevents the bottom of the honey from burning, and it will melt slowly.

The latter part of your question is one that it would take a great many pages to answer. Indeed, after an entire book has been written to try to give the points that a beginner ought to know, there are always enough questions to keep this department well filled. Even in the matter of queen-rearing alone a whole book has been written, and a most excellent one it is. If you are interested in queen-rearing by all means get the book on queen-rearing by that prince of queen-breeders, G. M. Doolittle.

Laying Workers.

I have two colonies of bees that I think have laying workers. The sealed brood looks like loaded pistol cartridges. What can I do with them? I want to save them. S. C.

ANSWER.—That's a hard question to answer, because you will probably not be willing to accept the best answer that can be given. The best thing is to destroy them. There isn't a ghost of a chance that they'll be worth anything next spring, and very little chance that any of the bees will be alive then. The probability is that no worker-brood has been present for a good while, and all the workers are aged. It may suit you better to unite them with another colony, for then you will *seem* to be saving their lives. But in either case, if you allow them to live, they will only consume a lot of honey and die after all.

Wants Increase Next Spring.

1. I have about 50 colonies and I want to increase my apiary in the spring about 30 colonies. Would it be better to buy Italians in nuclei and have them shipt to me, or buy black bees at home for $2.50 to $3.00 per colony, and transfer and Italianize at my own expense? The honey-flow commences here from sweet clover about July 10, but there is always plenty of honey coming in to keep them building up, before that time.

2. Would a 2-frame nucleus and queen be strong enough?

3. When would the best time be to purchase them so they would be ready for the harvest? WASHINGTON.

ANSWERS.—1. Probably you'll do better to buy the blacks and Italianize. You'll get ahead in increase faster in that way, and if you intend to keep Italian blood it will give you just so much more experience in introducing queens, for you'll find you will have considerable to do in that line if you try to keep anywhere near pure blood. You might combine the two plans, getting one or two nuclei, and the rest black bees.

2. A 2-frame nucleus, having a fair start in the season, will build up into a strong colony in a fair season, but you can hardly count on any surplus from it unless the season is extraordinary.

3. The year before.

Wintering—Queen's Laying—Uniting.

1. Will bees get along better through the winter in a hive that is perfectly air-tight all around (except the entrance) than in a hive that is slightly open, either around the cover or bottom-board?

2. How many months in a year should a good Italian queen be laying? and is it advantageous that she be laying late in the fall?

3. What is the advantage in uniting two fair colonies in the fall? WASHINGTON.

ANSWERS.—1. In ordinary cases, with ordinary entrance, they might be better off not to have all but the entrance perfectly air-tight. With a very large entrance, probably the closer the rest of the hive the better.

2. She may lay somewhere from 7 to 9 months. Under ordinary circumstances, the question as to whether it is advantageous to have a queen laying late in the fall should be answered in the affirmative. It is generally considered a desirable thing to have a goodly number of bees not too old to enter winter quarters, and late laying works toward this end. But if there is no yield of honey in the fall, it may be as well that she stop laying, as she generally does, earlier than if honey was yielding. For the period at which bees finish their course does not depend so much upon the number of days they have lived as upon the number of days they have workt. So it may happen that a bee that emerged in August may be younger than one in a second locality emerging in September, providing the yield in the second locality continued 2 months' later than that in the first.

3. Probably none, generally speaking. If you have more bees than you want, and must unite to keep down increase, it may be better to unite in the fall than in the following spring, for the united colony will consume less honey than the two would if left separate.

Will It Winter?—Stimulative Feeding.

1. Will a colony winter that covers both sides of three frames half way down, packt in leaves with plenty of honey? They are on frames of standard size, and had little brood Oct. 4.

2. If feeding stimulates brood-rearing in spring, how early, and how much, would you feed? Fruit blooms here about May 20; clover blooms about June 10. MASS.

ANSWERS.—1. Can't say for certain. Doubtful. It would be safer in a good cellar.

2. Try it only on part, and find out whether stimulative feeding is a good thing for you. Feed only when warm enough for bees to fly. Don't feed when it is so cold that the bees will be chilled to death when the feeding starts them to flying out. A half pound a day will be enough, unless they are somewhat short of stores.

Stimulative Feeding in the Spring.

I have four colonies and wish to increase largely in the spring, by stimulative feeding. When will it be best to commence feeding? Also, how much honey and water would you feed one colony per day? Do you dilute the honey with water? How do you feed it? SUBSCRIBER.

ANSWER.—Stimulative feeding in spring is a little like handling edged tools. Some judgment and experience is needed, or you'll do a good deal more harm than good. Indeed, there are many good bee-keepers who do not consider it advisable to practice stimulative feeding. Don't feed until bees are flying freely, for when it is too cold for safe flight, feeding may cause the bees to fly out never to return. Possibly it might be a good plan for you to try stimulative feeding on part of your colonies and compare results. An equal quantity of water may be added to the honey, and half a pint to a pint of the mixture given daily to a colony. Use any kind of a feeder you have on hand. Look out, however, that you don't start robbing. As soon as you find there are flowers for the bees to work on, you may as well stop till there is again a scarcity. Such scarcity occurs in many places between fruit-bloom and white clover.

Bee-Keeping for Beginners is the title of a 110-page book just out, from the pen of that expert bee-keeper of the South, Dr. J. P. H. Brown, of Georgia. It claims to be "a practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit." Price of the book, postpaid, 50 cents. Or, we will club it with the Bee Journal for one year—both together for $1.40; or, we will mail it as a premium to any of our present subscribers for sending us one new subscriber to the Bee Journal for a year (at $1.00), and 10 cents extra.

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

The Names and Addresses of all your bee friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums we are offering. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

PUBLISHT WEEKLY BY
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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 38. DECEMBER 8, 1898. NO. 49.

EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Chicago Bee-Keepers' Association met Dec. 1, as was announced. There were present about 40 people interested in bee-keeping. Some 35 of them became members of the organization, which now quite rivals that of Philadelphia in numbers, tho the latter is perhaps 15 or 20 years older. It is thought by some that there are over 200 bee-keepers in this (Cook) county. We hope that all of them will send in their 50 cents, and become members. Their membership fee can be mailed or handed to us, and we will see that it gets to the Treasurer.

The officers elected for the ensuing year are: President, C. Beers; Vice-President, Mrs. N. L. Stow; and Secretary and Treasurer, Herman F. Moore.

As a shorthand report of the proceedings was taken for the American Bee Journal, our readers may look for it after the completion of the Omaha convention report, now appearing, which will be about the middle of next month.

◆

Bee-Literature Without Bee-Knowledge.—That scribblers who know nothing about bees should constantly appear in print with statements that bring a smile to the face of a practical bee-keeper is nothing strange, but it does seem strange that reputable publications that really care for the truth should allow in their columns matter about bees so crude that it would hardly be suffered in relation to any other topic. That very able and reliable paper, The Youth's Companion, has a serial in its September numbers called "The Story of a Bee-Farm," that is notable for the very little information about bees, and the remarkable character of much that is given. A few samples may be given:

Bees don't sting after you learn to handle them, but for the first few seasons you must wear veil and thick gloves. Nuclei are called "nucleus swarms," and colonies are called "colony swarms." Italians gather honey from many flowers which native bees neglect. A good place to winter bees is a room above ground with an oil-stove to raise the temperature to 40° during cold snaps. "Never throw hot water at the robbers—that is barbarous and unscientific." (Probably that is the first time hot water for robbers was ever thought of.) A cloudy and damp afternoon, when most of the bees are in the hives, is especially favorable to begin Italianizing. Queens, not colonies, are "transferred." The expert operator of the story workt every day of the season with her own bees with bare hands and arms, and was never stung once, but put on veil and gloves when essaying to handle bees away from home, because *the bees were strangers to her!* The story winds up by saying:

> "At the present date of writing, January, we have 40 hives of bees in our dormitory. They are all wintering well, so far as can now be determined, and the outlook is that we can gain a comfortable livelihood keeping bees, even at the present low price for honey."

There ought to be a lively demand for a brand of bees, 40 "hives" of which would support a family!

◆

What Credit Costs.—In the National Stockman and Farmer of recent date we found this paragraph:

> "Did you ever think of how very expensive a luxury credit is? It doubles the expense of book-keeping, doubles correspondence, multiplies worry many times over, often destroys confidence, wrecks business galore, and makes mischief of all kinds without limit. More than all, many of these things enter into the cost of nearly everything which is bought and sold, and even the cash buyer, with all his discounts off, pays enhanced prices because of the cost of other people's credit. Imagine the world running a month without the credit system! Next to the millenium it would do more to create and maintain general happiness than any other condition that could be introduced."

Every word of it is true. And so is the advice of the man who said, "Pay as you go, or else don't go." How much more pleasant it would be to do business if every one would get cash and pay cash. If we could get all the money past due on subscriptions alone, we could not only pay cash promptly right along, but could get up a much better bee-paper than the American Bee Journal is now.

Why wouldn't it be a good plan for our subscribers to begin at once to keep their subscriptions paid in advance? It is a splendid feeling to have—the feeling that your financial obligations are all met. We'd like to enjoy that feeling once more, and might soon do so if all who owe us could see their way clear to send it in.

◆

Killed by Eating Wax is the rather bold heading of this item, which appeared in a recent issue of the Minneapolis Tribune:

> "Carl Maynard, son of M. M. Maynard, a fruit-grower, died Thursday morning of a very peculiar malady. The young man had been eating very heartily of honey in the comb, and the large amount of beeswax he ate clogged up his stomach and intestines to such an extent that sickness and death resulted in spite of all efforts of the doctors to save him. Mr. Maynard was about 26 years of age, and workt on his father's farm."

Mr. John M. Seiler, one of our regular subscribers, sent us the foregoing, and added these words:

> "I know the father, but did not know the son. Three of them ate a one-pound section of honey."

It is just possible that eating the honey had a little to do with the case, but the probability is that it had nothing whatever to do with it. For three men to swallow the wax contained in a pound section of honey is a matter not at all remarkable. One man might swallow that much wax any day, or for that matter every day, and suffer no inconvenience from it. The wax would be in small pieces, and produce no bad effects. Suppose the worst possible case, that in eating the pound section one of the three men got more than his share and got all the wax, and suppose that by some means it got workt into a solid ball, it would be about an inch in diameter, and could pass through in that form without clogging either stomach or intestines.

We think no one need stop eating comb honey on account of the above instance, for in all probability there were other complications besides the little wax that conspired to cause the death of the young man.

We believe we never before heard of three persons eating a pound section of honey at one sitting. Of course it may be easily done, but why should any one want to fill up with so much sweetness all at once? People ought to use commonsense in eating as well as in anything else.

◆

Large Hives Abroad.—In Gleanings, C. P. Dadant gives an interesting sketch of the introduction of large hives into France, Switzerland, Italy, Belgium, etc. This was accomplisht chiefly by the elder Dadant, altho he was living in America. Of course it was through writings in the bee-papers. L'Apiculteur, at that time the leading journal in the French language, was bitter in its opposition of large hives, and also of movable-frame hives. Mr. Dadant sent a translation of a report given by A. I. Root in the American Bee Journal for 1868, page 64. By giving extra stories and extracting frequently, Mr. Root had taken 203 pounds of honey up to July 21. The easy reply of the French editor was that the whole thing was a hoax. This will not be so hard to understand when it is remembered that the Europeans at that time used hives smaller than the 8-frame Langstroth, and Bastian wrote that there was no necessity for a super containing more than 6 to 12 pounds of honey. Later, M. Bertrand started Revue Internationale, and slowly but surely new methods took the place of the old ones, and to-day large hives are the rule. The editor of Gleanings is strong in the belief that large hives and large colonies, the two together, are the things for producing honey.

THE WEEKLY BUDGET

Miss Mathilda Candler, of Grant Co., Wis., called on us last week. She has had a fair honey crop this year, and has 60 colonies now, in good condition for winter.

Mr. Frank McNay and wife left last week for Southern California, where they expect to spend the winter. Mr. M. called to see us when passing through Chicago. We trust they will have a pleasant winter, and we commend them to the California bee-keepers.

Mr. John A. Blocher, of McLean Co., Ill., wrote us Nov. 25:

"The Bee Journal is all right, and I like to read it. It helps me out in a good many things. My bees did well this season, considering."

Mr. Geo. W. Hufstedler, perhaps the most prominent queen-breeder in Bee Co., Tex., writing us Nov. 25, said:

"We are having some real winter weather here. My bees are in fine shape for next season—about 225 colonies after doubling up for winter."

Dr. C. C. Miller, of McHenry Co., Ill., attended the regular quarterly meeting of the Chicago Bee-Keepers' Association, Dec. 1. He was feeling fairly well, or as well as could be expected at his age—67 years. But his heart is just as young as when it first began to "beat its way" in this world. Dr. M. is very hopeful that next year may be a good honey season. This year he harvested about 1,000 pounds of honey—good, bad and indifferent. He had nearly 300 colonies, run for comb honey.

Mr. W. A. Crandall, of St. Lawrence Co., N. Y., writing Nov. 26, said:

"I can hardly wait until the American Bee Journal gets here each week. I feel like thanking all the correspondents for the many good things."

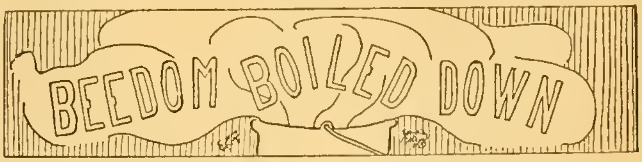
Mr. M. H. Mendleson, of Ventura Co., Calif., writing us Nov. 22, had this to say:

"It is still dry here, and some are crying 'dry year again.' I do not expect early rains, but I hope for a rainy winter. I wish you continued success."

Mr. M. M. Baldridge, of St. Charles Co., Ill., made us a pleasant call Tuesday, Nov. 29. Altho living only about 40 miles from Chicago, he has not been here for a year. Mr. B. still gets from consumers his old price of $1.20 for a 5-pound pail of honey, as shown by his pocket order-book. His crop was about nothing the past year, in common with many other bee-keepers.

Mr. A. P. Raymond, of Clark Co., Wis., called to see us last week. Years ago he was an extensive bee-keeper in New York State, but for some years he has been a traveling man. He expects very soon to engage in bee-keeping again. He will succeed. He is a fluent writer, and we trust we will have the pleasure of hearing from him frequently when he once more enters the field of bee-keeping.

Mr. J. F. Moore, of Seneca Co., Ohio (a brother of Mr. H. F. Moore, Secretary of the Chicago Bee-Keepers' Association), called last Friday. He has about 250 colonies of bees, but secured only a small crop the past season, like the great majority of bee-keepers this year. Mr. Moore is a very pleasant gentleman to meet. It would have been a fine thing if he could have attended the Chicago meeting of bee-keepers had he been here a day sooner.



Cotton as a Honey-Plant.—H. H. Hyde says, in the Southland Queen, that cotton is his main honey-plant in July and August, giving a long and continuous, slow flow, usually producing a good crop, of fine flavor.

Swarms Leaving with Strange Virgin Queens that unite with the swarms after issuing are spoken of sometimes as making trouble when queens are clipt. J. B. Hall says, in the Canadian Bee Journal, it is a mistake to suppose such a thing. A swarm that issues leaving its clipt queen may go off with a strange laying queen, but not with a strange virgin. In such supposed cases a virgin queen issues from the hive together with the laying queen.

Bee-Hives are discust by W. Z. Hutchinson in the Country Gentleman. He advocates small hives, less rather than more than an ordinary queen will fill in the height of the breeding season, eight Langstroth frames being sufficient; prefers an outer case with temporary packing to chaff hives; thinks the Heddon the best hive and the dovetailed next; says closed-end frames can be handled more rapidly than open-end ones; and thinks the honey-board will hold its own against wide, deep top-bars.

Getting Bees Off Extracting-Combs.—Bees leave capt combs more readily than uncapt ones—an extra point in favor of leaving combs to be capt, according to J. R. Jasek, in Southland Queen. He takes off the super without taking out the frames, but he doesn't use bee-escapes. Too many bees remain, even if the escape is put on the evening before, sometimes ants take possession after bees are scarce in the super, and sometimes the combs melt down in the hot sun. He has a good volume of smoke, doesn't blow any in the entrance, but blows under the cover as soon as raised, and keeps blowing over and between frames all the while he is putting the cover aside and loosening the super. Then he quickly sets the super on a wheelbarrow, covering with a robber-cloth. The whole operation is done in two minutes if the combs are all sealed, longer if the cells are unsealed. The combs are taken on the wheelbarrow to the honey-house, and the bees remaining on them fly to the escape window, a few young ones being brusht on some extracting-combs.

Experience on too Small or Large a Scale.—Editor Hutchinson has advised trying new things only on a small scale. Dadant and Heddon object that you can't tell much by too small experiments. Editor H. says there are two sides to the question, and gives the sensible rule: "It is not advisable to adopt a new plan or invention, about which there is any doubt, upon a larger scale than that upon which you can afford to meet with failure.—Bee-Keepers' Review.

Southern Honey.—The editor of the American Bee-Keeper enters a protest against some statements made at the Omaha convention relative to Southern honey. E. R. Root said: "Southern honey has a strong flavor which is liked by some." Mr. Hill thinks the elder Root was nearer the mark when he said, "Most localities yield both good and poor honey." Mr. Whitcomb is askt for proof of his assertion that a warm climate produces honey of inferior quality, and a colder climate honey of much better flavor. C. F. Muth is quoted as including in the three choicest varieties of American honey, two that are Southern.

Much Depends on How a Thing is Said.—The editor of the Bee-Keepers' Review says there are different ways of telling what one knows. "Knowledge, of the accuracy of which one is absolutely positive, if imparted with an air of superiority, often arouses resentment instead of gratitude. To be able to point out the ignorance or fallacious ideas of a friend with such tact that he seems to have discovered them himself; to start in his mind a train of reasoning that will lead him to a correct conclusion; to thus bring out the best that is in him, is an accomplishment worthy of great effort. One can be positive and outspoken, and yet courteous." True words, and well said.

Full Sheets of Foundation in Sections were discust in the Canadian convention. Messrs. Best and Post thought full sheets secured twice as much honey as small starters. Mr. Sparling and Mr. Holtermann thought not so much as double, and Mr. McEvoy thought three times as much. Messrs. Hall and Hoshall had tried, in the same super, sections filled with foundation and sections with a narrow strip. The former were solidly sealed while the latter were half full of comb with no sealing at all. Messrs. Holtermann and Newton argued a better price for the better appearance of sections as full of foundation as possible without bulging.—Canadian Bee Journal.

Are Separators Indispensable?—H. R. Boardman in his travels through Michigan, as he relates in the Bee-Keepers' Review, was surprised to find that so many progressive, practical men had dispenst with separators. He thinks thoughtful and careful apiarists may dispense with them, but the editor thinks it is more a matter of locality. Separators are needed where the flow is slow, or comes on slowly. In Michigan the flow from clover or linden comes suddenly, the bees commence on all sections, all grow alike and are like so many bricks. But he would use separators in a place where many bulged combs would be built without them.

From the Egg to the Bee.—Fr. Greiner reports some observations in Gleanings. He watcht through a glass wall, a colony with four frames in very hot weather, and at no time in their history did the larvæ die stretcht out straight—always curled up. Part of the worker larvæ were sealed in 8 days and 14 hours, all within nine days. The shortest time from the egg to the perfect worker was 20 days and 2 hours. All emerged from the markt cells in less than 21 days, except one which he lost track of. In drone-cells the capping occurred in 10 days. The bees gnawed off the waxy surface of the drone-cappings to some extent, somewhat as they do with queen-cells. The shortest time for the drone was 24 days and 16 hours, the longest time just 25 days.

To Requeen Cheaply.—Delos Wood does it thus (Gleanings): One of his best colonies he sets apart for queen-cells. To another he gives a large amount of drone-comb. Stimulates the one to be used for cells and gets a strong swarm from it. This swarm is put in an empty single-story hive, and as soon as the queen has a circle of eggs and brood in several combs, the queen is taken away. The edges of the combs are cut away, thus removing the eggs, and having just-hatching eggs at the edges. Cells are built by wholesale, and of the best quality, the queens emerging at the same time. Many fine cells can also be saved from the old colony that swarmed. He never gets good queens by giving eggs. By the time the larvæ hatch out of the eggs the bees have lost their vim for brood-rearing.

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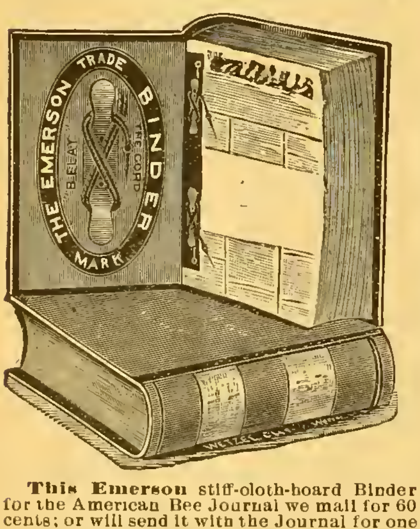
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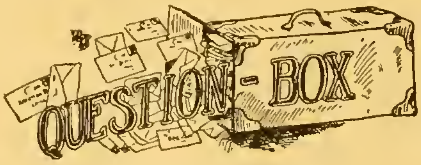

In the multitude of counsellors there is safety.—Prov. 11-14.

Does Any Color Irritate Bees?

Query 86.—1. Is it true that bees are less likely to sting one with white clothing than with black?

2. Or, are bees in any way irritated by any particular color?—Ohio.

W. G. Larrabee—1. Yes.

Eugene Secor—1. I think so.

Prof. A. J. Cook—1. I think so.

Dr. A. B. Mason—1. I believe it is.

P. H. Elwood—1. Yes. 2. Yes, dark colors.

Emerson T. Abbott—1. I do not know. 2. I doubt it.

Dr. C. C. Miller—1. Yes. 2. The lighter the better.

G. M. Doolittle—Anything black and woolly and fuzzy seems to call forth the ire of bees beyond anything else. A

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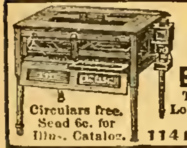

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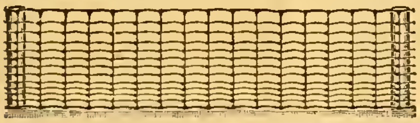

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white, smooth surface is the least objectionable of anything, according to my experience.

J. M. Hambaugh—1. Yes. 2. They seem to dislike black.

Chas. Dadant & Son—1. Yes, they will sting black the quickest.

E. France—1. Yes. 2. An old, black wool-hat is the worst thing.

Rev. M. Mahin—1. I have never noticed any difference. 2. I think not.

R. L. Taylor—1. I do not think they are. 2. I have never noticed that they are.

Dr. J. P. H. Brown—1, 'Tis true. 2. Black or bright red are most objectionable.

J. A. Green—1. Yes. Bees frequently show an aversion to black clothing, especially if of a fuzzy nature.

Jas. A. Stone—1. I don't know. 2. They may be by any color they are not in the habit of seeing around the apiary.

C. H. Dibbern—1. Yes, perhaps because they do not see one so easily. 2. I do not think that any color tends to irritate bees.

R. C. Aikin—1. Yes. 2. I do not know that the color particularly irritates, but when angered it surely receives the attacks.

J. E. Pond—1. I have seen such statements, but they are not borne out by my own observation. 2. I do not think they are—why should they be?

E. S. Lovesy—1. It is claimed so, and to some extent I believe it is true, altho with the use of a good smoker I have never noticed any difference.

S. T. Pettit—1. Yes. For 15 years I have drest in white while handling bees. 2. They don't like any dark color, but black gives the most offence.

A. F. Brown—1. I think so; also that cotton clothing is less objectionable than wool. 2. Dark colors, when in markt contrast with light, seem to attract their ire.

O. O. Poppleton—1. I think so. 2. I doubt whether color of any kind irritates bees, but when they are on a lookout for a target they seem to see dark colors first.

D. W. Heise—1. It is. 2. Decidedly so; especially is this true of a black sateen shirt, which has the same effect on the bees' temper as the red flag has on the bull.

Mrs. L. Harrison—1. Yes. 2. I don't know so much about color as texture; they do not sting brown linen, starcht; the sting slips over it. Woolly goods would irritate them.

G. W. Demaree—1. I would not wear white clothing in the apiary whether the bees liked it or not. 2. My experience is that bees will give less annoyance "fiddling" in your ears if you will wear a straw hat. They certainly do not like a wool hat.

GENERAL ITEMS

Ridding the Apiary of Ants, Etc.

Three years ago I was troubled with ants, and to my dismay my son turned a litter of pigs among the hives. The following two years my apiary was exempt from ants. Last spring the ants appeared again, and

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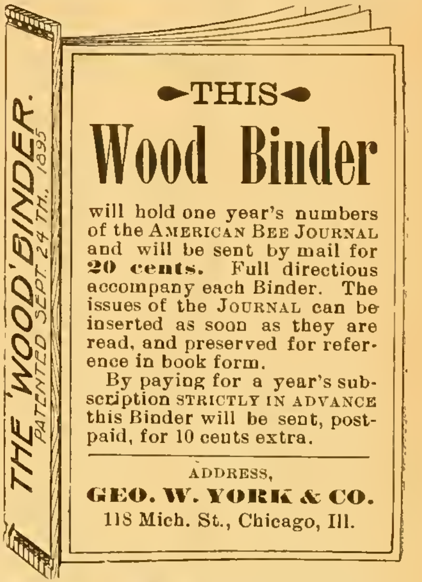

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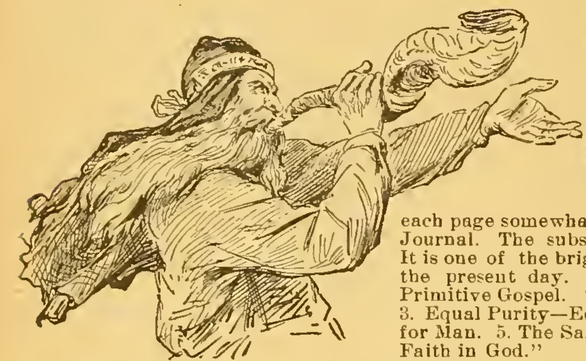

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during summer in went a litter of pigs, being the less disagreeable of the two nuisances. I keep only from 10 to 12 colonies. An old dish-pan worn through in the bottom is good to gather pieces of comb and set out for the bees to nibble, and carry away something all the time. After the sun melted part of it, I saw them load their hind legs with wax, the same as pollen. Then after there was not much comb building and honey coming in freely, the bees were not much seen on it, and the hot sun melted it so the wax run through the cracks in the bottom of the pan. Then I took a little fish-pail, put water in it, and set the pan on top with contents, stirred it now and then, and covered it with a pane of glass, and as a result I had a nice lump of wax.

Take two hand-sled runners with slats nailed crosswise, to place by the side of an old colony to set the hive on to make room for the new swarm. It is far ahead of blocks, and when ready to move tie a rope to it and draw to its new place.

The Miller feeder is made half its size, and set crosswise over the frames, then with a 14-section super the other half of the hive is covered, and when the bees begin to work in the sections the feeder is taken off, and, after the honey harvest, put it on again. In cold weather, say at packing time for winter, fill the entrances with burlap. MICHAEL HAAS.

St. Joseph, Mich.

Put the Bees in All Right.

After a two days' flight our bees were placed in the cellar Nov. 21. Rain set in just as we finisht, and the next night came the blizzard and freeze-up. We are all right this time. F. A. SNELL.

Carroll Co., Ill., Nov. 25.

Tall Sections, Etc.

I got an average crop of honey this year, tho more dark honey than usual, but from the fact that I used the Danzenbaker prize section, 4x5 inches, and being so much better filled and capt out to the wood, I'm getting better prices for it than I ever could get for the best white honey in the old, wide 4¼ sections. No more square sections for me.

I have just returned from quite an extended visit among bee-keepers, and while I am quite an enthusiast on the Golden method of producing comb honey, I was agreeably astonisht to find so many bee-keepers talking about and preparing to try this method. A. S. DALBEY.

Montgomery Co., Md., Nov. 28.

A Young Bee-Keeper.

I have been interested in bees ever since I could know anything about them. The first bees that I owned I found in a tree when I was 11 years of age, but they died the following winter. Then I had no more bees. At 13 years of age my step-mother gave me a strong colony, and they swarmed twice this spring. I bought 2 other colonies the past summer from my cousin. Now I am 14 years of age, and have 5 colonies. It was a poor honey season in this section the past summer. JULIAN HOLLMAN.

Lexington Co., S. C., Nov. 14.

Poor Country for Bees and Honey.

If I could report a great number of colonies, or a large amount of honey per colony, it would be a pleasure to write; but I must be content to report that I live in a very poor country for bees and honey. The first property I ever owned was a colony of bees in a box-hive; since then I have kept all the way from one to 40 colonies; and 20 pounds of surplus honey per colony is my average yield, except about every five years we have a good honey season; then if we are up and doing, and have our bees strong, we are pretty certain of 50 pounds of surplus honey per colony.

This certainly was an off year, both in

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☞ We would suggest that those bee-keepers who did not produce any honey for their home demand the past season, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. The Circular, "HONEY AS FOOD," will be a great help in creating customers for honey. Address,
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bees and honey. Cane-mills are, I think, responsible for the loss of bees. When the mills were through work, I found my best colonies contained only enough bees to cover 3 or 4 combs, Langstroth size, and mostly young bees; so I went to work earnestly and got them strong enough for winter, by uniting. I got some partly-filled sections, and a few old combs well filled with honey. I got a nice lot of young bees, and all the brood they can care for these frosty nights. H. B. LAMBERT.

Sampson Co., Ky., Nov. 15.

The Bee's Length of Vision.

On page 615, the inquiry concerning a bee's length of vision interests me from a scientific point of view. While I am not able to answer the question with authority, the suggestion occurs that this point can be determined somewhat accurately (if it has not already been the subject of investigation by entomologists or other scholars) by micrometric studies of the focal length of a bee's eye.

The eye is a natural lense and subject to certain mathematical laws so far as penetration and absorption of light may be concerned. I infer that bees have the power of vision at considerable distances. Bee-keepers testify that a bee can attack a man more successfully at a distance of 10 feet from the hive than if he stand in immediate juxtaposition. Indubitably every animal is fitted with senses co-ordinate with its needs for existence. Experiments have demonstrated the approximate length of vision in many animals. The cat family is known to see better at some distance than close at hand. Deprived of the sense of smell, a cat will be unable to find a mouse placed immediately under her nose, but she is well prepared to spring upon her prey from a distance and to see it in the dark by means of extraordinary powers of light absorption through dilation of the pupil.

Eagles are said to be very far-sighted, and, in confirmation, instances are cited where they have dropt upon their prey from elevations absolutely beyond the range of human vision. It is reported that tests of the sight of the Andes condor prove that he can see at the distance of 100 miles.

It may be, therefore, quite possible that an all-wise creator has furnisht the bee with power to discern objects within the range of its flight. We are all acquainted with her rapidity of flight, compared with her physical size, and we know how she will describe an upward curve to avoid obstacles. To bring into play the necessary muscular movements in doing this, must require considerable (fore)sight, or long-sight.

I would be glad to have some patient searcher after scientific truth tell us what he can find in nature or in the books concerning the sight of bees. GEO. H. STIPP.

San Francisco Co., Calif.

The Willowherb or Fireweed.

On page 674, the question is askt by Dr. Mason, "Does the willowherb grow more than one year on the same ground?" To which Dr. Miller answers, "I think it does, but after a time that ground will not produce the willowherb. It does not grow continuously. It grows only for a time on the burnt districts."

The willowherb or fireweed grows from seed scattered by the wind in August. In September the young seedlings make their appearance, which freeze down to the ground in winter. In early spring they start before the fern comes out and keep ahead of that so that in blooming time the fireweed overtops everything else. If the seedling stands in rich ground it blossoms and bears seed that year. If it grows in poor ground it will not bloom. I know of a steep mountain-side where the willowherb grew for three years without a flower, but last summer (the fourth year) it bloomed full, and was rich in nectar.

The plant dies every fall down to the roots. The roots send out in the spring several young shoots. The main root grows

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horizontally, from which grow the shoots, which in time make regular stumps, from which year after year the long stalks grow. The root adds one ring every year, just like a tree. The root also starts to decay in the center first.

The willowherb commences blooming in July; new buds form continually, while the blossoms give way to seed-pods, till a killing frost comes.

I know it grows on the same place for at least 12 years, and perhaps forever, if it is not choked out by other plants, like young trees. It tries its best to grow higher than other plants, as it needs sunshine. I measured one stalk 13 feet high. The evergreen trees, spruce and hemlock, will in length of time, aided by their shade, overtop and kill the fireweed.

To make the seed grow is as hard as to make the seed of sweet clover grow, but the root will grow with me every time.

The nectar gathered from that plant is thin, but quickly ripens in the hive to a good body. It is the mildest honey I know of; is clear white, not a shade of color if pure and very sweet.

I have kept bees for the last six years, and secured honey from the fireweed every yeer, 1897 excepted. HERMAN AHLERS.

Clatsop Co., Oreg., Nov. 14.

[The roots which Mr. Ahlers sent us prove his statements regarding the roots of the willowherb or fireweed. No doubt there are many of our Michigan readers that could give considerable information concerning the rich nectar-yielding plant under consideration.—EDITOR].

* * *

Honey as a Food.

I had expected to have heard something of an answer to the question I raised last spring, which was, To what particular extent can honey be called or clast as a food? I gave my belief, but my object was, and is, to draw out the best authority to elucidate this point. I stated then that if honey is to be considered or accepted a food it could only belong to hydro-carbon elements, but while I had formulated the question—Does honey or any saccharine matter produce fat in the animal system?

Now I know there are some authorities that hold to the positive, and I, as well as many more, hold to the negative side. I do not see why this question would not be a suitable one to write on, and valuable to everybody. While I admit honey is of very great use to the consumer as a health preserver, it needs no change by way of digestion, but enters the circulation and undergoes a fermentive process resolving itself into lactic acid and water, and while this process is going on, heat is evolved, which is of course the great boon involved.

I was much interested in the account given of the Omaha meeting, on page 661, on the food value of honey, as per Mr. Whitcomb, as he says, "I think we entirely underrate the food value of honey," etc. I consider he is beside himself when he says that one pound of honey is of more value as nutriment than two pounds of pork. Of course, pork—that is, fat pork—is only for the same purpose, to produce heat, but not direct, but is stored up in the animal tissues as fat to be used when needed as a fuel, while honey is made available direct, and does not require the exhaustive powers of nature to change it somewhat and assimilate it. Honey is, therefore, of greater value as a heat-producer, because the process is accomplisht with much less effort and taxation of the animal strength, but I would not go so far as to hold with Mr. W. that one pound of honey is more than equal to two pounds of pork.

But let that be as it may, I am surprised at Dr. Miller, that he didn't tell us more on the line I have pointed out. I would feel greatly obliged if he will write out a chapter and enlighten us; there is no doubt he can do it, and I am going to take the liberty to say that there shall be no peace till he redeems this pledge, and many will vote him all the thanks he could possibly ask.

I trust that we have not heard all of this, or the last of it, but will get the real gist of the matter as soon as possible.

C. WURSTER.

Ontario, Canada, Oct. 26.

* * *

Not a Big Crop.

Bees are in good winter quarters on the summer stands, with plenty of bees and plenty of ripe stores. My honey crop was 1,800 pounds of comb and extracted from 41 colonies, spring count. This is not a big crop, but it is ripe and of good flavor.

My Alsike clover seed crop is 34 bushels and 18 pounds, from 56 pounds of seed sowed. There was the most honey from Alsike this year. C. G. MATTSON.

Chisago Co., Minn., Nov. 29.

* * *

Frame-Spacing; Perforated Separators

I wish to thank Mr. A. P. Raymond for his splendid suggestion for spacing frames, found on page 738. The "wire nail, and V groove in the rabbet," beat staple spacing, or any other, of which I have any knowledge. It disposes of the objection to staples when uncapping, and, also, obviates the danger of marring the comb while lifting the frame from the hive.

I also wish to thank Mr. Pettit for the idea of $\frac{3}{8}$-inch holes through the separators in the production of comb honey. I experimented the last season with over 100 separators thus perforated, using them on the standard "bee-way" sections, and finer, truer comb I never saw, and without a single exception. They are good enough for me. WM. M. WHITNEY.

Kankakee Co., Ill.

* * *

Nuts for Dr. Miller to Crack.

As it seems there is an expert "nutcracker" in the bee-fraternity, I wish to send a kernel or two for his hammer.

I had a queen-cell I was watching and waiting for, as it was in a hive of fine bees. I waited till the time for her to emerge had past some days, and she had not yet put in appearance. I opened the end of the cell and found a fully-matured queen, but dead, and some shrunken. I pulled her out, and hanging to her came another complete bee, but very small, like a dwarf.

At first I was somewhat entranced, and more surprised than I can tell; and wonder was greatly enhanced, to find two queens within one cell. But on closer inspection I found it did not look like a queen at all; the wings were as long as the body; just like a worker on a small scale.

Later, in a nucleus hive I had a frame with three nice queen-cells. I placed a wire-cloth cover over two to protect them from the first queen out; the oldest one, too, emerged all right. I took them out and left the other with the cover over her. A day or so after, I took a look and found her (or it) out of the cell in the comb—not a queen, but a perfect worker, so far as I could see. I thought it strange, and left it a day or two more to see what would develop, but no change came. I then let it go with the bees—there were but few—and I could not tell it from the others, and could never find her (or it) again.

I wish to say right here, this is no "put up job," but facts. I showed the "twin queens" to my wife, and told her I never saw or heard of such a case before. I am sorry I did not send the "plural queens" to Editor York, but did not think of it till I had thrown them away, past finding.

This may sometimes happen, but it is new, and a mystery to me.

Now Dr. Miller may be able to turn the X rays of his experience and wisdom on those cells and solve the puzzle. Tell us "What's the matter with Hannah."

Stephenson Co., Ill. A. W. HART.

Canning Fruit with Honey.

On page 726 is an enquiry about canning fruit with honey. We have used it two seasons, and like it. We put the fruit into a tight-covered kettle in the oven of the stove, and cook until tender, then add the honey and bring to a boil on top of the stove, and put in cans and seal while boiling hot. Juicy fruit, like peaches, pears and berries, need no water added, as the honey makes enough syrup. Dry fruits, like quinces and apples, need a little water to cook them tender.

We use the best white clover honey for peaches and fruit that is not very sour, ¼ pound of honey to a pound of fruit is about right for us; but the best plan is to sweeten to taste. I think the fruit keeps better than that canned in sugar.

I had for my breakfast this morning peaches canned in September, 1897. They were as good as the day they were put in the jars, and we think them much better than fruit put up with sugar. We have put up in honey, apples, blackberries, peaches and quinces. All keep well, and are very fine. We drain the liquid out of the honey that granulates coarse, and use the dry sugared honey for making candy, and in various ways for cooking, etc.

Don't cook the honey in with the fruit. The less you boil the honey the more of the honey flavor the fruit will have.

"Pa." asks what to do with comb honey. Tell him to keep it in a dry, warm place, the hotter the better, if it doesn't melt the comb; and he can keep it as long as he likes. E. D. HOWELL.

Orange Co., N. Y., Nov. 26.

Poor Season for Honey.

The past season was a poor one for honey in this part of the State. I commenced with 31 colonies, increast to 58, and secured 1,200 pounds of comb honey. My bees are mostly Italians and hybrids. I know that they work on the red clover bloom, especially during August and September.

Neighbor Herrick should get Italian bees and smaller hives. G. STOUT.

Hennepin Co., Minn., Nov. 28.

A Report.

I got 800 pounds of honey last year, and 500 this fall. It was mostly sold in the home market at 12½ cents a pound. I have 27 colonies of bees. MICHAEL LARINAN.

Rock Island Co., Ill., Nov. 28.

Stormy Weather.

The weather was so mild during the forepart of November that I delayed putting my bees into the cellar. Nov. 21 it rained and changed to sleet; the 22nd it snowed; the 23rd and 24th it was as low as six degrees below zero. During the middle of the day (yesterday) it thawed some and I dug the snow away from the hives and scraped off some of the ice from the covers, and intended to put the bees into the cellar to-day, but we are having another snow-storm, so I will wait. I have 25 colonies, and the most of them have an abundance of honey for winter. JOHN RIDLEY.

Winneshiek Co., Iowa, Nov. 25.

New York.—The tenth annual meeting of the Ontario Co., N. Y., Bee-Keepers' Association will be held in Canandaigua, N. Y., Dec. 8 and 9, 1898. An interesting program is in course of preparation. All interested in bees or bee-keeping are invited to attend.

Bellona, N. Y. RUTH E. TAYLOR, Sec.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Nov. 19.—Our market is very strong at 13c for best grades of white comb honey, with good No. 1 at 11 to 12c; ambers range from 8 to 11c, according to appearance, quality and flavor. Extra ted, white, 6 to 7c; amber, 5 to 6c; dark, 5c. Beeswax, 27c. All grades and kinds of honey are salable at this time R. A. BURNETT & CO.

St. Louis, Sept. 9.—Fancy white comb, 12 to 12½c.; A No. 1 white, 10 to 11c; No. 1 white, 9 to 10c.; dark and partially-filled from 5 to 8c, as to quality. Extracted in cases, No. 1 white, 6 to 6½c; No. 2, 5½c; amber, 5c; in barrels, No. 1 white, 5½c; amber, 4½ to 5c; dark, 4 to 4½c. Choice Beeswax, prime, 24c; choice, 24½c. At present there is a good demand for honey. WESTCOTT COM. CO.

Kansas City, Sept, 9.—Fancy white comb, 12@13c; No. 1, 11@12c; amber, 10@11c. Extracted, white, 5½@6c; amber, 5@5½c; dark, 4½@5c. Beeswax, 22@25c.

The receipts of comb honey are larger.

C. C. CLEMONS & CO.

Indianapolis, Oct. 3.—Fancy white comb honey, 12 to 12½c; No 1, 10 to 11c. Demand fairly good. Tar-colored comb honey, 8 to 9c, with almost no demand. Clover and basswood extracted honey, 6½to7c. Beeswax, 25 to 27c, WALTER S. POUDER.

Milwaukee, Oct. 18.—Fancy 1 pounds, 12½ to 13c; A No. 1, 12 to 12½c; No. 1, 11 to 12c; No. 2, 10 to 10½; mixt, amber and dark, 8 to 9c. Extracted, white, in barrels, kegs and pails, 6½ to 7c; dark, 5 to 5½c. Beeswax, 26 to 27c.

This market is in good condition for the best grades of honey, either comb or extracted. The receipts of the new crop are very fair, and some of very nice quality. The demand has been and continues to be very good, and values are firm on fancy grades and straight, uniform packing. A. V. BISHOP & CO.

Columbus, O., Nov. 18.—Market somewhat easier. Quote: Fancy, 14c; No. 1, 12c; No. 2, 10c; amber, 9c; buckwheat, 8c.

COLUMBUS COM. AND STORAGE CO.

New York, Oct. 22.—Receipts of comb honey are large, and there is quite a stock now on the market. While white is in good demand, buckwheat and mixt seem to be somewhat neglected, and quotation prices have to be shaded in order to sell in quantity lots: We quote:

Fancy white, 13 to 14c; No. 1 white, 11 to 12c; amber, 10c; mixt and buckwheat, 8 to 9c. Stocks of extracted are light of all kinds. Demand is good at following prices: White, 6 to 6½c; amber, 5½c; dark, 5c. Southern, in half barrels and barrels at from 55c to 60c a gallon. Beeswax dull at 26c.

HILDRETH BROS. & SEGELKEN.

Detroit, Oct. 20.—Honey in better demand and better prices as follows: Fancy white, 13@14c; No. 1, 12@13c; fancy dark and amber, 10@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

Buffalo, Nov. 25.—A most excellent demand continues for strictly fancy 1-pound combs at 13 to 14c. The usual so-called No. 1, 11 to 12c; lower grades move well at from 9c down to 7c; stocks very light in our market. Extracted honey, 5 to 6c. Beeswax, 24 to 28c. BATTERSON & CO.

San Francisco, Nov. 22.—White comb, 9½ to 10½c; amber, 7½ to 9c. Extracted, white, 7 to 7¼c.; light amber, 6¼ to 6½c. Beeswax, 24@27c

Stocks in this center are light and must so continue through the balance of the season. Choice extracted is especially in limited supply and is being held at comparatively fancy figures. Comb is meeting with very fair trade, considering that it has to depend mainly on local custom for an outlet. Values for all descriptions tend in favor of selling interest.

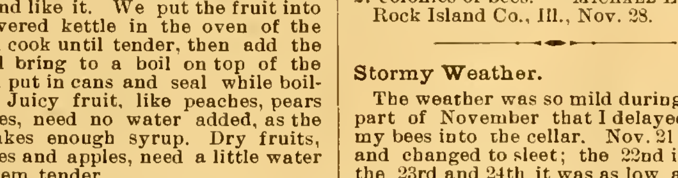
Boston, Nov. 28.—Liberal receipts with but a light demand during the holidays. As a result stocks have accumulated somewhat, and prices show a lowering tendency, still we hope for a better demand with prices at present as follows:

Fancy white, 14c; A No. 1 white, 12½ to 13c; No. 1, 11 to 12c; light amber, 10c, with no call for dark. Extracted, fair demand, light supply: White, 7 to 7½c; light amber, 6½ to 7c; Southern, 5 to 6c. BLAKE, SCOTT & LEE.

Cleveland, Nov. 29.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & CO.

THE "NOVELTY" POCKET-KNIFE!



Your Name on the Knife.—When ordering, be sure to say just what Name and Address you wish put on the Knife.

The NOVELTY KNIFE is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed an AMERICAN BEE JOURNAL reminder, and on the other side, name and residence of the Subscriber.

The material entering into this celebrated knife is of the very best quality; the blades are handforged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring steel, and the finish of handle as described above. It will last a lifetime, with proper usage.

Why purchase the Novelty Knife? In case a good knife is lost, the chances are, the owner will never recover it; but if the Novelty is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelties, your pocket KNIFE will serve as as an identifier; and in case of death, your relatives will at once be apprised of the accident.

How appropriate this knife is for a Christmas, New Year or birthday present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, a lady to a gentleman, or vice versa, a son to a mother, a husband to a wife, a brother to a sister or a gentleman to a lady—the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid, for $1. , or give it as a Premium to the one sending us **three new Subscribers** to the BEE JOURNAL (with $3.00), and we will also send to each new name a copy of the Premium Edition of the book "Bees and Honey." We club the Novelty Knife with the BEE JOURNAL for one year, both for $1.90.

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We have made arrangements whereby, for a limited time, we can send either the Farm Journal, published at Philadelphia, or the Poultry-Keeper, publisht at Parkesburg, Pa., both fifty-cent monthlies, and the very best in their line, with **Gleanings in Bee-Culture,** to a new or old subscriber, both for one year. But the conditions of this offer are that the money [$1.00] shall be sent in advance, and that all arrearages to Gleanings, if any, shall be squared up.

The Ohio Farmer and Gleanings in Bee-Culture
both for One Year for $1.10.

We will send the Ohio Farmer, a dollar weekly, one of the leading agricultural papers of the United States, and Gleanings in Bee-Culture, both for one year, to a new or old subscriber, for $1.10, **paid in advance,** and all arrearages to Gleanings, if any, squared up.

The Farm Journal is now in its 21st year, and takes the lead among all the low-priced agricultural papers. It is packt full of practical hints and suggestions; puffs no swindles, and inserts no humbug advertisements.

The Ohio Farmer is a larger paper, and is issued weekly, and is one out of a few really good farm papers.

The Poultry-Keeper is monthly, edited by P. H. Jacobs, and publisht at Parkesburg, Pa. It has a tinted cover in two colors, and is beautifully gotten up.

Remember that, in order to secure any one of these three papers, in combination with Gleanings, the money must be paid in advance, and arrears to Gleanings, if any, squared up These offers are very low, and will be withdrawn soon.

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38th Year. CHICAGO, ILL., DECEMBER 15, 1898. No. 50.

CONVENTION PROCEEDINGS

UNITED STATES BEE-KEEPERS' UNION.

Report of the 29th Annual Convention Held at Omaha, Nebr., Sept. 13-15, 1898.

DR. A. B. MASON, SEC.

SECOND DAY—AFTERNOON SESSION.

[Continued from page 774.]

After the reading of the above paper Mr. Eugene Secor read a paper, entitled

The First Half Century of Improved Bee-Keeping in America.

Growth is the law of the universe, but all growth is not continuous or uniform. The giant trees of the forest have not reacht their maturity by well-balanced annual accretions. Their development has been dependent on moisture, sunshine and nourishment, which are varying quantities.

The evolution of society has not been constantly progressive. Civilization sometimes leaps forward by cycles over a lifeless and profitless condition which, for centuries, had obstructed the onward march of ideal government.

The recent occupation of the West Indies and Philippines by the Anglo-Saxon race may result in removing the cancerous growth of Spanish tyranny from the world's body politic, and in turning the dial of Eastern conservatism ahead 500 years. More history has been made in the last four months than in four centuries during some periods of the world's past.

In the fields of discovery and invention the same erratic, inconstant tendency is noticed.

Secrets which have been lockt in the storehouse of Nature since the morning stars sang creation's birth have only been wrested from oblivion within the memory of some here present.

The modern gang-plow, so perfect and useful, is the slow out-growth of the first forkt stick that tickled the bosom of Mother Earth; but the greatest improvements in this implement are not too old to be remembered by some persons now living. Thus it has been in many of the industries. It seems to have been reserved for these latter times to develop and perfect the appliances to relieve labor, to accelerate business and travel, to stimulate investigation, and to make it possible for everybody to attain to some degree of culture.

What was the condition of the industry which we represent, half a century ago? How many people in the world at that time understood the habits or natural history of the honey-bee? Of course mankind had learned long before that honey was good to eat. The sons of Jacob took honey with them as a peace-offering when they visited Egypt the second time to buy corn. Samson's riddle had been propounded to the young men of Timnath about 3,000 years. Aristotle and Virgil, Swammerdam and Huber, had all lived and died and had left to the world the results of their investigations. Yet the pall of ignorance and superstitious mystery rested upon the mass of bee-keepers, whose tastes alone prompted them to appropriate the sweets which God had provided by means of this useful insect. Little progress had been made in the practical application of the knowledge gained by these observers and writers. The "king bee" was clothed, not only with kingly power, in the imagination of the common people, but seemed to be a dispenser of luck to a favored few. Not a journal in America or elsewhere was devoted to bee-culture, not a book had been issued by the American press on the subject, and no system of management was known save box-hives or hollow-log "gums," clumsy surplus boxes, and brimstoning the weak colonies in the fall. Increase of colonies was the measure of success; or, if increase was not desired they knew not how to prevent it. And when swarming-time came, many of the old-time bee-keepers believed that some sort of incantation was necessary to charm the bees, to prevent them from absconding.

Hon. Eugene Secor.

With horn, tin pan, or old brass-kettle,
The children thundered with all their mettle—
The aim of which din was, no doubt, to settle
  The frisky young swarm
  By the ancient form
Of drowning a noise by making more rattle.

"Practical bee-keeping," says Langstroth, "was in a very deprest condition, being almost entirely neglected by those most favorably situated for its pursuit."

At this period there appeared in America a man whose genius for investigation was destined to establish the science and to revolutionize the art of apiculture. It is just 50 years since the Rev. L. L. Langstroth was obliged to lay aside the active work of the ministry on account of failing health, and began to devote his time more fully to the study and practice of apiarian pursuits.

It is by such strange providences that the world's great problems are sometimes workt out. Had Mr. Langstroth's strength been sufficient for a vigorous prosecution of his chosen work, the improvements which he inaugurated in bee-keeping might have been left for some other American genius to devise, or, what is more likely, had been accredited to the old world, where the germ-thought was already taking form, unknown to the patient and gifted experimenter in this country.

I said but for Langstroth's failing health it might have been reserved for some other genius to surprise the world with the same improvement in methods; but genius is nothing but hard work, patient plodding and constant endeavor to develop the ideal. What we call genius is the metal of the mind tried in the furnace of application. Langstroth did not wake up some fine morning when the birds were singing their sweetest songs in the the orchard, and the bees were making music among the linden blossoms, and proceed at once to elaborate his new system of bee-keeping as tho it had come to him in a dream.

Morse did not flash upon the world in one brilliant moment *his* great achievement of conveying thought by the electric telegraph. It took years of study and barrels of midnight oil to develop the idea uppermost in his mind. Nevertheless the name of Morse is immortal. We call him a genius. Thus did Langstroth study, observe and experiment through years of patient waiting until he gave the people access to the interior economy of the hive, and to the industry an impetus never before attained. He left a legacy to the American bee-keeper that will never be exhausted. The dividends from the fund of practical knowledge which he brought to light by his system of management will continue to bless humanity beyond the stretch of our imagination. The invention of the Langstroth hive and the publication of his book on the Honey-Bee aroused interest in a subject which had been a sealed volume to the great masses of the people. It was a revelation of Nature, interesting as fiction, charming as poetry.

Nature-studies are always interesting. All we need to make them so is a teacher like Agassiz, or Huber, or Langstroth, to lead us out into the delightful fields of awakened observation.

The introduction of the Italian bee into this country soon after Langstroth's improvement in the hive gave a still greater momentum to the desire for advancement in the study and practice of this interesting and important adjunct of the farm. Since then we have weighed in the balance of utility nearly everything that gathers honey. The Syrian, the Cyprian, the Carniolan, have each contributed its blood to the building of a race adapted to the needs of this continent. That we shall finally succeed in breeding a bee better adapted to this country than anything yet imported is the confident hope and expectation of not a few persons who have given the subject consideration.

When the American Bee Journal was establisht, in 1861, another step was taken toward the dissemination of apicultural information. It was the beginning of an effort to popularize the science and art of bee-culture. At this present writing there are eight periodicals in the United States devoted almost exclusively to bee-keeping, many of them edited with markt ability and enthusiasm; and hardly an agricultural journal is publisht that does not devote a portion of its space to the subject. Books both scientific and practical have been multiplied until apiculture need no longer be considered in the realm of mystery or on the borders of the domain of luck.

The extractor, the smoker, the section-box, the bee-escape, the queen-excluder, foundation, queen-rearing—all are products of the past 50 years, and all the outgrowth of the movable-frame, conceived and perfected by the Prince of American bee-keepers—the immortal Langstroth.

According to the census of 1870, which was the first statistics obtained by the government relating to the bee-industry that I regard as reliable, the apiarian products of the United States were—pounds of honey, 14,702,815; pounds of wax, 631,129. By the last National Census, 1890, the figures given are 63,897,327 pounds of honey, and 1,166,588 pounds of wax; showing an increast production in the 20 years, of nearly 350 percent of honey, and nearly 85 percent of wax. That the latter product did not keep pace with the former is probably due to better methods, fewer colonies brimstoned, and consequently a less quantity obtained from the practice of melting combs and straining.

The population of the United States increast about 55 percent during the two decades before mentioned. By the last enumeration the total population was 52,622,250. It will be seen from the figures given showing the production of honey, that the best we have yet been able to do is a little more than one pound per capita per annum. If we deduct the quantity used in various manufactures and as medicine, and also the large quantity used in some families every year, it can readily be believed that one-half the people never taste honey, notwithstanding the modern facilities for producing it. In my own family, averaging about eight, we consume at least 400 pounds a year, or 50 pounds each. If that ratio were maintained by all families we could dispose of *50 times* the quantity we now produce. Therefore, there is no immediate danger of over-production if the proper distribution can be accomplisht; and with the facilities for distribution which we now possess compared with those of 50 years ago it would seem that there is yet a vast field for our activities.

But problems have been forced upon us which never rackt the brains of the ancients. I have never read that in the olden time bee-keepers were compelled to flee to the mountains and forego civilized society in order to keep bees.

I wonder if in Babylon they had a city ordinance prohibiting Assyrian bees from flying over the walls into the celebrated hanging gardens? It probably never occurred to Nebuchadnezzar that a royal decree would have prevented every bee in the kingdom from sucking the flowers which he planted for his imported wife. It was reserved for some 2x4 "city fathers" of a 2x4 corporation to banish from the corporate limits of their 2x4 town every innocent bee that might be found on a honeysuckle or in the act of appropriating a drop of water from a reeking back alley!

Perhaps Nebuchadnezzar had some sort of heathenish idea that insects were a part of the great plan of the Creator to pollinate the blossoms and fructify the orchards and vineyards; but these modern smarties, who know about as much of science as the average Philippine insurgent does of the American Constitution, attempt to improve on God's plan of doing things. The "man in the moon" ought to hold his nose when he is compelled to look down on such decaying wisdom!

If some of the so-called horticulturists, and some of the small-calibre municipal authorities could have their way, and drive the industrious bee into retirement or bankruptcy, I imagine I see an army of two-legged pollinators going around the country with their camel's-hair brushes and a pot of yellow dust, endeavoring to restore the fertility to garden, farm and orchard that existed before the fall—of human greatness.

Another fact which we are obliged to face to-day, didn't trouble our forefathers. That fact is the adulteration of extracted honey, and the misbranding of fradulent substitutes which are as innocent of flowers and bee-mediation as a baby is of the sins of its grandmother.

Our grandfathers knew nothing of that beautiful-looking, but unsatisfying, syrup, known as glucose. Their bees got honey from the flowers, and man-made honey was as much an undiscovered article as Chicago was an unknown city. Both seem, now, to flourish together. Those Chicago "bees" beat the world in turning out surplus! They work not only day and night, but just as well in winter as in summer. No winter problem to solve—no dull season with those city "bees!" Corn at 15 cents per bushel, and 15 pounds of "pure white clover honey" from every bushel is ahead of anything our grandfathers knew even in those "good old times!"

There is no use for us to say, among ourselves at least, that extracted honey isn't adulterated or counterfeited. Any bee-keeper with his eyes open and taste uncorrupted can easily satisfy himself to the contrary.

I have sometimes wondered if the invention of the extractor was a good thing. It cheapened the cost of production, it increast the output, but it has brought honey into disrepute. The opportunity was afforded dishonest people to put up something resembling the genuine article that is sometimes as far from being honest as the serpent that tempted Eve.

But I suppose the extractor has come to stay, as surely as some sins for which we are not personally responsible; and the only logical thing to do is to put a stop to it if we can. Unity, courage, discretion—these are the trinity that will bring victory to the cause of purity in foods.

There are also educational problems in our business yet unsolved. Modern bee-keepers have not the advantage of always being regarded as public benefactors (at least in America where the spirit of independence is abroad, and custom and precedent sit lightly on the public conscience).

A great deal of unwarranted prejudice exists against bees and bee-keepers which it is our business to overcome Whether it arises from ignorance, or malice, it must be counteracted.

Among the objects of this organization are these: To assure to the pursuit the rights to which it is entitled under the law; to assist in educating the public as to the relation of bees to plant life and fertility, and to keep before the people the knowledge of the value of honey, both economically and as an unsurpast article of food.

The last half century of our splendid accomplishments in the garden of apiculture may be but the hint of what the future has in store for us if we rise to the height of our privileges and advantages in this best of all lands for individual and industrial development. We must not rest on the laurels of past achievements when important responsibilities lie before us. The world is moving forward, not backward. The net results of all human effort are progress. Some obstacle may retard our advancement for awhile, but in God's good time right shall triumph over wrong, and happiness and prosperity shall perch upon the banners of earnest and faithful endeavor.

The yesterday of Bee-Keeping is in the charnal-house of History. I am able to bring out only a skeleton or two to remind you of its past. Its To-morrow is in the womb of Opportunity, from which shall come forth all the good which we merit through striving.

"O River of Yesterday, with current swift
Through chasms descending, and soon lost to sight,
I do not care to follow in their flight
The faded leaves, that on thy bosom drift!

"O River of To-morrow, I uplift
Mine eyes, and thee I follow, as the night
Wanes into morning, and the dawning light
Broadens, and all the shadows fade and shift!

"I follow, follow, where the waters run
Through unfrequented, unfamiliar fields,
Fragrant with flowers and musical with song;
Still follow, follow; sure to meet the sun,
And confident, that what the future yields
Will be the right, unless myself be wrong"—(Longfellow.)

EUGENE SECOR.

By a unanimous vote, the thanks of the Union were extended to Mr. Secor for his paper.

Dr. Miller—I would like to ask whether Mr. Secor meant to say that there were cases 50 years ago when increase was not desired?

Mr. Secor—I said, "If increase was not desired, they knew not how to prevent it."

Dr. Miller—Do you think there were cases 50 years ago when increase was not desired?

Mr. Secor—My grandfather had as many colonies as could be profitably kept in one locality. I do not think he knew how to prevent increase. I said "if."

Mr. Danzenbaker—My grandfather had 300 colonies of bees when I was born. He had more than he wanted, and when they would swarm he would let them stay on the trees until they flew away. He would get what bees he wanted, and let the rest go. He brimstoned the bees to get the honey. And he did another thing—he used to set a box alongside the hive, and the bees would fill it, and then he would take it away. But he resorted to brimstoning the bees, too.

The Secretary next read a paper by Mr. J. F. McIntyre, of California, entitled,

Best Size of Hive for Use in the Apiary.

I have been given an exceedingly broad and interesting subject, but as I and every one who cared to say anything on this subject have recently had our say, I will treat it as briefly and concisely as possible. "For use in the apiary"—this includes every locality in the world, every system of management, every kind of bees, comb and extracted honey; and you want to know the one "best size of hive" for all these localities and conditions. "I don't know." Guess yourself.

For several years I have been trying to find out the best size of hive for extracted honey in the Sespe apiary, with a very strong desire to prevent swarming, or any further increase of stock. My experiments lead me to believe that Dadants' hive and system would be the best for this purpose, but my apiary contains over 11,000 Langstroth combs, and to change these to the two sizes in the Dadant hive is out of the question. Large combs and plenty of them in the brood-chamber, with prolific queens to match, give the largest number of bees per colony, and with plenty of super room the larger the colony the more honey we get per hive—yes, I must say it if it paralyzes Mr. Hutchinson—it would be much more profitable to get all the honey from a location with 200 large colonies, than it would be to get it all with the same number of bees in 300 smaller colonies. The 300 small hives would require more labor per hive to care for them than the 200 large hives, they require more care to prevent starving, more labor and annoyance to hive swarms, the first cost of the hives would be greater, and the expense of feeding them through a dry year in California would be greater.

Four years ago I deepened a few 10-frame Langstroth brood-chambers, making the frames 12 inches deep, and used a regular Langstroth super above to extract from, with a queen-excluder between. These hives produce fine, large colonies, and I would be satisfied with them if they would not swarm, but they do swarm with me nearly as badly as the regular 10-frame hive; and when this happens they are not so desirable, because the brood-chambers are too large for a divided colony or to hive a swarm in without contracting with division-boards.

My apiary also contains 62 regular 12-frame Langstroth hives, which are open to the same objection—they are too small to prevent swarming, and too large to hive swarms in, and altogether do not average as much surplus honey per hive as the 10-comb hives. Dadant prevents swarming by tiering up those shallow extracting-supers, and always putting the empty combs next to the brood-chamber without a queen-excluder between; and if swarming is successfully prevented his brood-chamber is all right for size. I have been through the shallow-frame fad for comb honey, and am satisfied that any frame smaller than the Langstroth, or any hive smaller than an 8-comb Langstroth is unprofitable in this locality; and for extracted honey I am satisfied that any hive smaller than a 10-comb Langstroth is unprofitable.

J. F. McIntyre.

The upper limits of size are not so well defined, as they depend entirely on the prolificness of our queens, the length of time that our bees have to breed up in the spring before the honey-flow commences, and our success in preventing swarms. One of my neighbors, Mr. Keene, keeps his bees in 8-comb Langstroth hives four stories high, without any queen-excluders or any one to watch for swarms, and his average yield per colony is just about the same as his neighbors, who put in their time during the swarming season watching for swarms and hiving them.

If next season is a good one I want to try a large number of 10 and 12 comb Langstroth hives three stories high. I will start with single brood-chambers in the spring, and when these are nearly full of brood I will raise them up and put another brood-chamber full of empty brood-combs under them, and a super full of empty store-combs above them; and if they do not swarm, and their average of surplus honey is as high as the balance of the apiary, I will put another brood-chamber under every hive. J. F. MCINTYRE.

Mr. Westcott—I would like to hear from the members of the Union. In our locality the 8-frame hive for comb honey seems large enough. As I said before here, we have no honey-flow to amount to anything until fall; in August or September we get our honey-flow. The colonies have to be kept in condition to catch the flow when it comes. As a general thing along about the first of August I cut out the queen-cells, and it is quite a job to lift the supers and get into the hives; but of course if a person keeps that up, he has it to do every eight days until about the first of September, then they will hardly try to swarm any more. The 8-frame hive seems large enough for this locality; but perhaps California would need larger hives than we would in Nebraska.

Mr. Hatch—Some of you may remember that about four years ago I wrote an article for Gleanings in which I said I preferred the 10-frame hive. Dr. Miller, Ernest Root, G. M. Doolittle and all of them jumpt on me rough-shod, and tho I was very busy I had to write article after article, and fairly wrote myself out trying to defend the 10-frame hive. Since that time I have kept bees in Arizona, and have used five different styles of hives. I had some a foot square and a foot deep; some a foot square and 7 inches deep; some after the Gallup style of hive; and then 8 and 10 frame Langstroths. With the same management I could get more honey from the 10-frame than from the others, up until the last extracting; then the honey was stored below more. All were run with a queen-excluder between the extracting-frames and the brood-chambers. Since then I have operated in California with 9 and 10 frame Langstroths for extracting.

E. R. Root—How many stories?

Mr. Hatch—Two and three, according to the strength of the colony. Ernest Root has come over on my side of the fence gradually, and I hope that in three or four years there will be more. I do not recognize any essential difference between hives for comb and those for extracted honey. If you have a good hive for the one, it is a good hive for the other; I mean so far as the brood-chambers are concerned. Management is the whole story. If you have a system of management whereby you can make a success of the 8-frame hive, and reduce the work down to the minimum, stick to it. One man successfully uses a hive the brood-chamber of which is a foot square and 7 inches deep, and gets lots of honey; but my system of management is not adapted to it at all. It depends on whether you "catch on" to the right system of management; there is where the whole secret lies. I can handle a colony better with 10 frames side by side than with 10 frames one above the other. If I get more brood than I want in the hive, I can take some out and give it to a weaker colony. In that system I have less work than with the two-story system. When it comes to the extracting season, pile on as many as you want. In California we need a larger hive for stores than you do in this country, where the winters are more severe, for the reason that they eat more out there in the winter. It takes more stores to carry a colony through the winter in California than it does in Wisconsin, because out there the bees fly a great deal more through the winter, and they get comparatively little to eat at that time.

Dr. Mason—You say this man with the small hives gets large quantities of honey. Where does he get it? By piling up the stories?

Mr. Hatch—Yes, sir; five or six high. He uses a queen-excluder and confines the queen down where he wants her. And while I am up, I want to speak of a scheme that J. H. Martin has. He uses the Heddon hive. This year he put the queen-excluder on and put the queen down in the bottom section. He had lots of honey in his hives. When I visited him last fall he had four supers full on an average on his hives, probably 160 pounds to the colony. Last spring it was thought that there was going to be no honey season at all, but he put the queen in the bottom story and put the excluder above and then went off and left her.

Mr. Danzenbaker—I have spent about 25 years in studying hives. In visiting different fairs, the hives and the exhibitions of honey always attracted me, for I wanted to discover the best hive for my own use. Finally, I combined the good points of several and made my hive. I have settled upon a 10-frame hive, with a capacity equal to the 8-frame Langstroth. It gives more room for sections for comb honey. Take the same capacity in an 8-frame hive and you can put on 24 standard sections; put the same capacity in a 10-frame hive, with the frames 7⅛ inches deep, and you can put on 32 sections. I put on 100 sections over a hive of the same brood capacity where I could put on but 75 on an 8-frame hive. In California the conditions are of course different. Such men as Mr. McIntyre and Mr. Mendleson, who produced honey by the carload, can judge of the conditions for themselves. They know what they are doing, and can judge what hive to use. Captain Hetherington has 300 colonies of bees in Virginia this year. He didn't take off a single super of honey. I was in the same vicinity, and I got 2,000 sections of honey from half as many bees. His colonies were strong and hives full of bees, but there was capacity in the brood-chambers for storing honey, and they did it there. He put his supers on, but a man told me he hadn't one super of honey this year. I had a letter from a man in New York who bought one of these hives, and he says, "I have to confess that bees in your hive produced more honey than bees in any other hive in the yard." It is to the difference in the size of the brood-frames that I attribute it.

Dr. Mason—If what Mr. Hatch has said is true, that the system of management is the secret of securing honey, then Mr. Danzenbaker has been fooling away 25 years of his life in trying to find the best hive instead of the best system.

Mr. Danzenbaker—I have mentioned several men who have been using hives for 10 or 20 years, and who have made a success with mine. The only difference is in the depth of the brood-frames and in the sections.

Dr. Mason—Perhaps you throw in some of your enthusiasm with the hive. I use the 8-frame Langstroth hive, piling the stories one on top of the other. I have colonies with three and a half full stories. When I came away, I pulled up the cover and lookt in and saw that the top frames were full of honey. I tried to lift some of the hives, but couldn't do it. It has frequently been the case in years past that when I was ready to get the bees prepared for their winter quarters, I found scarcely any honey in the brood-chambers, and then I had to take some and put it below. I am very much inclined to favor the idea that Mr. Hatch advances, that there is more in the system of management than in anything else.

Mr. Hatch—If you had a good 10-frame hive you would not have to bother to put any honey below.

Dr. Mason—I would suggest that Mr. Danzenbaker spend the next 25 years of his life in finding out the best system of management.

Dr. Miller—I have been trying to think when I "jumpt on" Mr. Hatch, as he says. If he knows what kind of a hive I want, and what size, he knows more than I do. There is one point, however, that I would like to ask about. He says there is no difference at all, except in the management, whether you are working for comb or extracted honey.

Mr. Hatch—I said there was no difference in the hive; that the hive would be adapted to both, so far as the brood-chamber is concerned.

Dr Miller—Suppose we have a 10-frame hive, with a strong colony, and there comes a time when there is a fall flow; the brood-chamber is about full, and they get more than they would put in the brood-chamber. If I put on sections above, instead of working on the sections I have known times when they would simply crowd the brood-chamber; but if you put on an extracting-super, they would go up and put the surplus honey in the extracting-combs. There is a case where I should think there ought to be a little difference in the hives for one or the other.

E. R. Root—In reference to the 7-inch frame, I talkt with Capt. Hetherington at the time of the Buffalo convention. He tried the 7⅛ and 7 inch frames for several years, and he told me he gave it up. It is in the management. I don't think the 7-inch frame has anything to do with it.

Dr. Peiro—I am satisfied that you boys don't know anything about this business anyway. I once took a jack-knife and a saw and a hatchet and made a hive—a 20-frame hive. You may as well have them big enough while you are about it. I can prove to you by good, reliable authority, right here, that that 20-frame hive was chockfull of honey, and it had all the bees it could hold. I verily believe it weighed 150 pounds. Mr. York and Mr. Abbott tried to lift it, and couldn't. Now, I don't say that I am right always—not always; but I do say that that hive contained better honey and more of it than any hive I have had since. [Laughter.]

ELECTION OF OFFICERS FOR 1899.

Mr. Westcott—I move that we proceed now to the election of officers, and that we put off the balance of our program until that is completed.

The motion was seconded and carried. Nominations being declared in order, Messrs. E. R. Root and E. Whitcomb were placed in nomination. A ballot was then taken and Mr. Whitcomb having received the majority of votes cast was declared elected president for the next year.

Mr. Whitcomb—I thank you for the compliment, and I will try to merit your confidence.

Nominations for the vice-presidency being declared in order, Mr. C. A. Hatch was named and declared elected.

Nominations for the office of secretary were then declared in order, and Mr. W. A. Selser and Dr. A. B. Mason were named.

Dr. Mason—I wish you would select somebody else. I have tried to work faithfully for you; I never accept any position without trying to do my level best in the work, but I wish you would select somebody else.

Nominations were then closed, and the members proceeded to balloting. Dr. Mason was found to have been almost unanimously re-elected.

Several called for a speech from Dr. Mason.

Dr. Mason—My friends, you know that I can't make a speech; you have had reason to know that in the past two days. But I can say to you that I am grateful for this evidence of your confidence—not for the ballots you have cast for me, nor because you have elected me again, altho I feel that it is an honor to serve you in any capacity. You have before this honored me for two terms with the presidency of the association—something that never happened before that time, except with Mr. Newman. So I feel that this is an expression of confidence that I cannot help but appreciate, and I do appreciate it. I live upon the good things my friends give me, more than I do upon what I do myself; and that is why I appreciate, I think, the good that may come to us all when we realize what He did for us who died to redeem our souls from death.

The convention then adjourned until 7:30 p.m.

[Continued next week.]

CONTRIBUTED ARTICLES

No. 6.—The Care of Bees for Wintering.

BY C. P. DADANT.

For eight or ten years past, we have personally abandoned the practice of cellar-wintering, owing to the better success we have achieved, of late, in out-door wintering. I do not know but it would perhaps be best to narrate our experience on this subject to the reader, an experience of 30 odd years, and let him draw his own conclusions.

We began experimenting on in-door wintering in 1865, on a small scale. We had then, perhaps in all, some 20 or 25 colonies, and as we had no cellar worthy of the name, but merely a "hole in the ground" under our log-house in the woods, we concluded the first year to try a clamp, such as had been recommended by German bee-masters, in the Bienenzeitung.

We therefore dug a trench of sufficient length to contain all our hives side by side, and deep enough so that the hives might be entirely hidden in it. In the bottom of this trench we laid two 4x4 timbers lengthwise, and on these we set our hives, removing the cap, or cover, and leaving only the honey-board. Over the top of the trench we laid boards that reacht about 6 or 8 inches beyond the pit, and on these a layer of straw, roof-shaped, then a layer of earth and another layer of straw and earth; making such a covering as a farmer uses, in many parts of the country, for apples or potatoes. We had previously, however, made four light tubes, by nailing four plasterers' laths together for each tube, which had been placed perpendicularly, two of them reaching to the bottom, and the other two at the upper part of the silo, so as to make a light change of air for the breathing of the bees. The trench was drained by a short gravel drain at each end.

We had very good success, and, encouraged by this, we again put away our bees in this fashion, the following winter. But the winter was very wet this time, and through alternate thaws and freezes, accompanied with rain, the ground became soakt, our drains proved insufficient because they became stopt up by freezing, or for some other reason, and the extreme of moisture destroyed a great proportion of the colonies. I believe that during that winter we lost fully a third of the colonies. This discouraged us in any further attempts at silo-wintering. Yet, we know that the practice is good, and in localities where there is little or no danger of a thaw during the winter, I am sure this would be a very safe method for an apiarist who had no cellar.

In this part of the United States we have now more commodities than formerly, our log-houses have been replaced by convenient homes, the cellar ordinarily occupies the entire space under the house, and it is quite easy to partition off a portion of it for the use of the bees; but I know there must yet be many parts where they still have to do as we did in the '60's, keep a family in two small rooms, where they cook, live and sleep; put the children in a trundle-bed, and the cows in a straw shed. Then the young fellow had to go a-courting in a wagon, and felt happy if he had only a good spring-seat to take his best girl to church, or to a ball. What would the boys of to-day say of this?

When our log-house was abandoned for a better home (we then used it for a bee-house till the rats compelled us to tear it down), we took special pains to build a large cellar, and partitioned off a portion of it, a space 10x20 feet, purposely for the bees. This special room has two windows, and the walls and ceiling are lined with a sawdust partition to keep the temperature more even. This was the more necessary because we have a furnace in the cellar to heat the house, and it would produce more warmth than needed. We had already wintered enough colonies, in the hole under the log-house, to make sure that a temperature of more than 45° was likely to make the bees restless, while a temperature of less than 40° had the same effect.

There had been some discussion among bee-keepers as to the proper degree, and a few men held that the bees could stand a great deal of heat, while in the cellar, without suffering; one man even went so far as to assert that they would winter in a cellar warmed to a temperature of 70° to 80°, and that he had tried it successfully. This shook the faith of some of our friends, until it was ascertained that this person had just been *guessing* at the temperature of his cellar, and had no thermometer upon which to base his assertions. A good thermometer costs only 25 to 50 cents, and we used one in the cellar, at all times, and my father visited the bee-room hundreds of times during the winter, and found uniformly that the bees were the quietest at 42° to 43°, and that below 40° or above 45° they began to stir.

We used this cellar very regularly for 12 or 15 years (it had been built in 1875), and it invariably happened that the bees wintered best in it during the coldest winters. This is easily understood, for it is much easier to warm up such a cellar than it is to cool it down, when once warmed up, when the temperature on the outside is still higher. In very cold days, if the thermometer registered a lower temperature than 40°, all we had to do was to open the door between the two cellars and a steady increase would at once take place. If too warm, during cold days, a little increase of ventilation through the windows would soon regulate that defect. But when the weather got mild, and remained so for several days, it always proved an impossible task to cool the air enough, with 100 colonies in such a small space, to keep them quiet. We tried a tubful of ice, but the difference made by it was not worth mentioning.

Of late years, we have had comparatively pleasant winters, and have found that, altho we lost but few colonies in cellar-wintering, it was usually preferable to leave the bees out-of-doors, as they breed earlier and run less risk of pillage or spring dwindling. We believe that we are, here, on the southern limit of safe cellar-wintering, and if we lived farther north we would invariably winter the bees in a cellar.

I see that I have not yet given instructions as to when and how to put the bees into the cellar, and will put this off until next week.

Hancock Co., Ill.

Eight or 10 Frame Hives—Tall Sections.

BY H. LATHROP.

On page 727, reference is made to Editor Hutchinson's comments on Dadant's articles in Gleanings on the subject of large *vs.* small hives, in which Mr. Hutchinson calls attention to the fact that the Dadants run their apiaries for extracted honey, while it is the comb-honey producers, who, as a rule, advocate a smaller brood-chamber than the Dadants advise. The point is well taken.

I believe Mr. McIntire has also recently stated, on this subject, that "a 10-frame Langstroth brood-chamber is not large enough to prevent swarming, and too large to hive a swarm in without contracting." That is the reason I use and prefer an 8-frame hive for comb honey production. I wish to dispense with contracting, so the 8-frame brood-chamber seems to be the best size. If I want a larger brood-chamber I add another story. In running my apiary for comb honey, even in good seasons, I usually have but 33 percent of my colonies cast swarms; this I think is not a bad showing for a comb honey yard.

In the future I do not expect to allow any more increase than enough to repair winter losses. I use the Heddon plan of hiving swarms on the old stand; and instead of allowing increase of colonies I shall feed the hatching bees back into the working colony, and finally use the combs for hiving another swarm. However, the brood from colonies first casting swarms will be used in strengthening up light colonies until every one has all the brood they can hold.

The past season I tried to have a few colonies build their own brood-combs from starters an inch wide; but I do not like the plan—too much bother. I contracted to five frames, and let them work awhile, then I found they were building too much drone-comb; then I gave to each, one or two frames of drone-comb; this helpt matters out, and, finally, when they had finisht their combs I took away the drone-combs and filled up with full sheets of foundation.

But I found that colonies hived on full sheets of foundation were ready for work in the sections first, and there was so much less work about it that I decided that as a rule I shall hive on combs or full sheets of foundation. If I want combs built by the bees I will have it done by small colonies, as Mr. Doolittle advises, by crowding the bees on two or three combs. By this plan they build beautiful combs, and I think pay well for their keep and the labor expended on them.

My honey crop this year was about one-third of what it was last, the flow being short, and that only from basswood. I tried the new Ideal super with tall sections, but could not see any advantage in them. When I went to the convention of the Southwestern bee-keepers, I took a well-filled section of each size along, and placing them side by side askt a number of ladies which they would prefer at the same price, and they invariably chose the square section. It seems that in this part of the country the tall section does not take as it does farther east; but I will continue to experiment with it next year. Monroe Co., Wis., Nov. 18.

⁂

Eating Honey and Cream—A Report.

BY A. F. FOOTE.

In the report of the convention at Omaha, I see there was considerable said about honey making some people sick, together with some suggestions as to the possible cause, etc. I used to think that there was only one way that honey could make me sick—that was for the want of it; but 20 or more years ago I learned that I could take no quicker or more certain emetic than to eat honey with *pork* or pork gravy; and to this day I will lose my dinner in five minutes if I do it. For a nice, delicate meal—supper for instance—there is nothing, to my notion, that quite equals honey and *cream*, with bread, instead of butter. It just "touches the spot," and, better yet, it stays there.

Do I hear some one say that this is extravagance? On the contrary, my wife says—and I am quite inclined to agree with her—that it is economy, for the same amount of cream churned into butter will not go as far; besides, it saves the churning.

I do not suppose every editor, even of a bee-paper, has an everyday supply of cream, but if "ye editor" will come up to our farm, which "flows with *cream* and honey," I will guarantee him at least one good, square meal of the mixture.*

My bees stored no surplus honey till the last week of June, and during the next three weeks I secured about 30 pounds of section honey to the colony, spring count, of fine quality white clover, Alsike and basswood. Then dry weather came on, and the bees never stored another pound of surplus—no buckwheat or fall honey of any kind. Cold and wet put them back the forepart of the season, and dry weather cut the crop short the latter part.

I secured 25 new swarms, which I put into 15 hives. Now, out of 53 colonies, I find about 25 with sufficient stores for winter, 10 doubtful, 3 dead—one devoured by worms—and the balance with very little honey.

For five weeks, at a critical time, my bees had no care, as Sept. 9 myself and wife went to our old home in Winnebago county, Wis., where we had a delightful visit with old friends and neighbors in that and Green Lake county.

Mitchell Co., Iowa, Nov. 7.

[*Thank you, Mr. Foote, for your kind invitation. We would like to accept, seeing you would furnish us with "a good, square meal," and also "Foote" the bill. If we were "Foote"-loose we would start right off. But as we are not, we will just ask you to be our "proxy," and fill up on that rich diet—honey, cream and bread.—EDITOR.]

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☞ See "Bee-Keeper's Guide" offer on page 797.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Using Frames of Granulated Honey.

I am an amateur, working for increase. Last spring my bees had two to three frames of honey left in each hive (some candied) when spring flowers and fruit-bloom appeared, and the storing of new honey commenced. If the conditions are the same next spring, would I make a mistake to put these frames of honey in another story and fill the brood-chamber with frames of foundation (previous to any bloom)? If not, should the second story be above or below? and should they be uncapt to stimulate breeding? What can be done best with brood-frames filled with candied honey?

WASHINGTON.

ANSWER.—If given the chance, the bees will make closer work than you probably suppose in using up the candied honey. Put it right close to the brood, so that they will be obliged to empty the cells for the queen. It will be no harm to uncap it. Of course this refers to next spring. If you put it in an empty upper story and fill the brood-chamber with foundation, the possibility is that it may be left over, only to be worse the next year. If there is much of the granulated honey, and it is badly granulated, it is possible that the bees may throw out some of the granules, letting them fall on the bottom-board. You may save these, melting them to feed to the bees. Put an empty story under the brood-chamber, having no entrance at the bottom of the empty chamber, but above, and the granules will be saved, more or less, in the empty story. Probably you can make no better use of brood-combs containing candied honey.

When a second story is added to increase the brood-nest, give it below. That saves heat.

Covering Knots—Quinby Frame.

1. Will you republish the recipe for covering up the knots in hives before painting, so the pitch will not show through?

2. What are the dimensions of the Quinby frames?

3. What size is the hive the Dadants use, and how many frames?

MINN.

ANSWERS.—1. I don't know where to turn to it, but I think it is shellac dissolved in alcohol.

2. The hanging Quinby frame is 18½x11¼. The closed-end or standing Quinby frame is 19⅛x11.

3. The Dadants use the hanging Quinby, with hives to hold 11 frames.

Wants the Best Apiarian Fixtures.

I sold my large apiary last spring, and am now going to start anew. What is the best size hive to use? Also best frame, best frame-spacer, and best size of section? What do you think of the fence-separator and plain section?

Please tell me just what kind of a hive you would use if you were going to start in the bee-business again; just the frame you would use, the section, and all there is to a hive that would suit you best. I make my own hives and frames, and so don't care for standard sizes, nor any supply dealer. I just want your candid opinion. MICHIGAN.

ANSWER.—If I could wave a magician's wand over all my hives and fixtures and have them changed so as just to suit me, I think I would settle upon the 8-frame dovetail hive. If I were making them myself, I would probably do without the dovetail corners, for I wouldn't have the proper machinery for it.

The frame should be the one I am now using, which, I am sorry to say, is not on the regular list of any hive manufacturer, but there is no regular frame that suits me. If it came somewhat near the mark, I should prefer a frame such as others use. The top-bar of my frame is 1⅛x⅞, with a saw-kerf to admit the foundation. The saw-kerf runs the length of the top-bar on the under side, and is ¼ inch deep and 5/32 wide. End-bars are 1⅛x⅜. The bottom-bar is in two parts, each 17⅝x½x¼. The second part of the bottom-bar is nailed on after the foundation is put in, the foundation being cut ½ inch more than the inside depth of the frame. That allows ¼ inch to slide into the saw-kerf of the top-bar, and ¼ inch to be between the two parts of the bottom-bar. The outer dimensions of the frame are the regular 17⅝x9⅛. The lug or projecting end of the top bar is ½ inch, the frame being spaced endwise by a staple driven in the end-bar under the lug, the staple projecting ¼ inch.

For spacing the frames one from the other, a common wire nail is used as a spacer, the nail being 1⅛ inches long, with a head 3/16 to ¼ inch across. A nail specially made with a head ¼ inch thick, so that it could be driven automatically to just the right depth would probably be better, but such a nail cannot be had. Four such nails are driven in each frame as spacers, two on one side at one end, and two on the other side at the other end. As you hold up the frame before you with one side of the comb facing you, the two nails at the left end face you, and the two nails at the right end are from you. The upper nail is driven in the top-bar, about half an inch from its upper edge and half an inch from the end-bar. The lower nail is driven in the end-bar about 2½ inches from the bottom of the frame. I do nut recommend this frame as one that will suit every one, as I know of no one else using it, and I have been using it only two years. If my bees didn't use any propolis I might like the Hoffman as well.

I should want to do some experimenting with the Ideal super and deep section so as to decide whether to adopt that, or the T super with sections 4¼x4¼.

The failure of the honey crop last season prevented a trial of the fence and plain section, so I have no practical knowledge of them.

It isn't a certain thing that what would suit me would most surely suit you. If I didn't have to haul bees back and forth to and from an out-apiary, I wouldn't care so much for a hive so small as the 8-frame, and I don't think I should be willing to use so small a hive if I couldn't use two stories at least part of the time.

A Queen Experience—From 12 to 50 Colonies.

1. About 40 days ago I attempted to introduce an Italian queen (after killing the black one) in the shipping-cage. The other day I saw a fine black queen alight at this hive and march in. As there have been no drones for some time, what would be the outcome, or what is the best thing to do with this colony, considering the time of year (Nov. 25)?

2. With a good season, would it not be possible to increase a dozen good colonies to 50 by using foundation and laying queens for nuclei? KANSAS.

ANSWERS.—1. Let it alone till next spring. You may find it with a laying black queen.

2. Yes, it's possible, but look out! It's also possible to have 50 colonies so weak that you'll not have 12 left the following spring.

Several Questions on Management.

1. Why should all uncapt honey be extracted from the brood-chamber before packing for winter?

2. I want to try the double brood-chamber plan next season, as practiced by you. Can I use foundation in the added brood-chamber (as I have no extra combs) to good advantage, or will I have to procure combs?

3. When you wish to add but two or three frames in the lower story, how are they arranged? Do you fill the vacancy with dummies, or just leave the space vacant?

4. I have had bees but two seasons, and I find that both years they began to swarm in the latter part of April, and the prime or first swarm also; the old colony would swarm again about the middle of June, which is about the middle of the white honey-flow. Is this as it should be? If not, how am I to avoid it? Would not adding the extra brood-chamber keep back the first swarming till about the first of June, when they could be hived ready for the white honey-flow, which came the 5th to the 10th of June? I have no trouble with after-swarms, having had but one.

5. If you knew that the honey-flow that you wisht to go into the sections would come on a certain day, how long before that day would you wish your bees to swarm?

6. Do you use queen-excluders on your newly-hived swarm? If so, how long do you let them remain on after hiving? TENN.

ANSWERS.—1. It is somewhat doubtful that many extract all unsealed honey before going into winter quarters. Those who do so probably give as a reason that the unsealed honey is more inclined to become thin and sour than that which is sealed. It is probably thinner in the first place than that which is sealed, and has the chance to attract moisture from the air better than if sealed. Without question, the thick, sealed honey is better for wintering, but a large amount of it is not always, if often, present, and when only a small amount of honey is unsealed it may not pay for the trouble to remove it.

2. Foundation may do in the lower story, but the bees will be a little slower to work down in it. If the colony is strong, it might work well to put a frame of brood in the lower story and put a frame of foundation in its place in the upper story. Of course this should not be done till the queen has fully occupied all the room in the one story.

3. You may put two or three frames where you please in the lower story, having them together and under the combs fully occupied with brood, with a dummy next the frame on the vacant side, or if the frames are in the center putting a dummy next the vacancy on each side. There will be no immediate need of filling the vacancy with dummies, but after the frames or combs below are well occupied there is a likelihood that the bees will commence building in the vacancy.

4. It would be hard to say positively just what would be the result, but the thing is well worth trying.

5. I don't know. I'm inclined to think I should want all the swarms that issued to come just when the flood of honey came.

6. It is so seldom that I hive a natural swarm that I can hardly tell what my practice would be, but I think I should prefer an excluder and the supers to be put on at once, the excluder to remain at least three or four days. If no excluders are used, it is better not to put on supers for two or three days after hiving.

Questions on Sweet Clover.

1. You recommend white sweet clover for honey and for impoverisht land. I have a lawn of about 10 acres at my summer residence on Cape Cod, where, also, I have several colonies of bees. Two of these are in the roof of a building, and from one of these I take about 50 pounds of honey every fall, cutting it from the rafters. It is always very thick and rich, but quite dark-colored. There are quantities of milkweed and bouncing betts in the vicinity—do these account for the color?

2. The edges of my lawn, as well as my kitchen-garden, seem to be running out—the sod is sandy. In reading your remarks on the sweet clover, it occurred to me that I might improve my land and the color of my honey at the same time. Do you know how this clover does in this location and soil?

3. When ought it to be planted?

5. Ought the ground to be fertilized when the clover is planted?

6. How does the clover improve the land unless it is left uncut and plowed under?

7. Do you consider it better for the land and the bees than the white clover we have here?

8. How much seed would I require to the acre, and what is the price? MASS.

ANSWERS.—1. I don't know the color of honey obtained from milkweed or bouncing betts, but have an impression milkweed honey is amber. A patch of considerable size of bouncing betts is right beside my home apiary, but I have never seen a bee at work on it. The dark color may not be due to the source of the honey. It may be that it is only the comb that is dark. That might be because the comb is cut from below, where it becomes dark sooner than if stored above the brood-combs. If a comb is cut on a plate, and the honey that runs out on the plate is light, then the thing to do in order to have light honey is to take the surplus by some modern plan.

2. The fact that sweet clover flourishes over almost the whole United States points to the strong probability that it would do well with you.

3. It can be sown any time appropriate for sowing other clovers?

4. Yes, your understanding is correct.

5. It might make a stronger growth for being fertilized, but will succeed without.

6. Like all the clovers, it takes nourishment from the air.

7. Probably much better for the land than white clover, and it will probably produce a good deal more honey to the acre than white clover.

8. It will do to sow the same as your farmers sow red clover, or it will do to use half as much seed, as it will spread out. The price is shown on page 795.

AMERICAN BEE JOURNAL
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

PUBLISHT WEEKLY BY
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UNITED STATES BEE-KEEPERS' UNION

Organized to advance the pursuit of Apiculture; to promote the interests of bee keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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GENERAL MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 38. DECEMBER 15, 1898. NO. 50.

EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The American Bee Journal for 1899.—About this time of the year many high-class periodicals tell something of their plans for the coming year. Many of them issue special circulars calling attention to the principal attractions that are in store for their readers during the next twelve months. This is all very well for papers that have much competition to meet in their own field, but we think that bee-papers need hardly do that just yet.

We are inclined to feel that the readers of the American Bee Journal are well satisfied that they always get more than their dollar's worth each year they read it; and also, that they are fairly well assured that when they renew their subscriptions again they will get another year's copies filled with good things on the subject of bee-keeping.

We feel that the American Bee Journal recommends itself pretty well. Its correspondents are among the most successful bee-keepers in the world. With one possible exception its various departments are not excelled anywhere in the present-day literature of bee-keeping. Its editor does not ask bee-keepers to subscribe for it because of his own superior personal attainments or qualifications, but because the contents of the American Bee Journal are just exactly suited to the needs of any one and every one who desires to make the greatest success of bee-keeping. Its editor does not claim to know as much as all the rest of the bee-keepers in Christendom put together, and never expects to do so; but he does claim to know at least a little about getting up a fairly good bee-paper *every week in the year*—something that no one else does in this country at the present time.

We do not want any one to continue to subscribe for the American Bee Journal unless he feels that it is worth all and more than the bare subscription price of one dollar a year. As soon as it reaches the point where it is not worth the price askt for, it ought to die—just as have many other bee-papers that existed for awhile and then dropt down and out.

We hardly need to say that the past clean record of the old American Bee Journal is its best guaranty for the future. It will be our earnest endeavor hereafter, as heretofore, to publish a paper that no real bee-keeper can afford to do without. Thousands have found it to be invaluable, and we expect that thousands more will continue to find in its columns the very information necessary to the largest success in the care and management of bees.

◆

Mr. P. H. Elwood, of Herkimer Co., N. Y., has been nominated as a candidate for election on the Board of Directors of the United States Bee-Keepers' Union. We most heartily second that nomination. Mr. Elwood is one of the very best men in all beedom, as well as one of the most extensive bee-keepers, and ought to be on the Board.

◆

The "Golden" Method of producing comb honey will be fully described in the American Bee Journal in 1899. We have invited Mr. Golden to tell our readers all about it, and he has already sent in some of the manuscript on the subject. He is receiving many strong testimonials endorsing his methods. The articles will likely appear every other week until the "Golden" honey-story is told.

◆

Bee-Notes in Agricultural Papers.—"Reports from all over the country indicate a good crop of honey. Bees have done well, and the yield has been large." Reading thus far at the beginning of "Farm Bee-Keeping," in the Modern Farmer and Busy Bee, the question arose, "Has Editor Abbott lost his level head and gone clean daft?" Further reading showed, however, that he was only quoting from the "Bee-Notes" of a prominent agricultural paper to show how unreliable such notes too often are.

If the agricultural papers would read their apiarian exchanges they wouldn't make such "breaks" as the foregoing.

◆

Dried-Up Foul Brood.—We have received the following from Mr. R. L. Taylor, of Lapeer Co., Mich., in response to Prof. Cook's request on page 737:

FRIEND YORK:—In your journal of Nov. 24, 1898, Prof. Cook wishes me to respond to a query about the dried remains of foul brood. You will find my reply in the Review for December, 1897, page 314, first paragraph.

As to the hives of diseased colonies, I have found it entirely safe to use them without boiling or other disinfecting, tho if one should be daubed with honey I should wash it off carefully. As ever yours, R. L. TAYLOR.

The Bee-Keepers' Review paragraph referred to by Mr. Taylor in the foregoing, reads thus:

"I just said there is no foul brood without ropiness, but this must not be taken *too* literally. That was said with reference to the stage during which the matter remains *soft*. After a few weeks the matter of each dead larva dries down and lies spread on the lower side—not the bottom—of the cell, a brownish black scale of the thickness of a man's thumb-nail. This peculiarity is of great use in making a diagnosis of the disease at some seasons of the year, as in the fall or in the spring, in the combs of a colony which has perisht during the winter, as colonies affected with foul brood are very liable to do. Soon after the breeding season is over these scales are about the only evidence of the disease that remains in a strong colony, as the cappings of the diseased cells are apt to be cleared away, but in a weak colony the discolored, defective cappings largely remain. It seems to be beyond the power of the bees to remove these scales, so if foul brood has been present they remain to reveal it if one will take the proper course to discover them. This is best done in this way: Take the comb by the top-bar and hold it so that a good light falls into the cells at an angle of about 70° or 80° from the top of the comb, while the sight falls upon the cells at an angle of about

45°. The scales if present will be readily discovered lying as already discribed, reaching almost to the margin of the lower side of the cell. I consider this a very sure method of diagnosis, tho in one or two cases I have seen similar scales where the death of the brood resulted from other causes."

A Pure Food and Seed Conference for Illinois was called to be held at Champaign, Dec. 13. Among the dozen persons signing the call we notice the name of Mr. J. Q. Smith, President of the Illinois State Bee-Keepers' Association. The call reads as follows :

> The extent of adulteration of foods and seeds with cheaper, inferior, or worthless, and often with harmful ingredients challenges the attention of all classes of citizens.
>
> The practice of substituting inferior articles in place of standard goods, or of introducing the same in packages and under names closely simulating those of well known excellence, not only works confusion of trade names and values, but results in gross injustice and loss, if not injury to the consumer; it embarrasses the retail dealer; it tends to drive honest goods out of the markets and to demoralize trade.
>
> In general, the purchaser is unable to detect either the nature or the extent of the fraud, which, enjoying the advantage of name and brand of better goods, is able to sell at a price that will yield enormous gains and yet that will cancel the profits of the honest manufacturer of, and dealer in, standard goods.
>
> The sale and use of wholesome food whether cheap or costly should not be discouraged or hampered, but the time seems ripe for such legislation as shall insure that things shall be sold for what they actually are, that the purchaser may know the exact nature of what he buys, and be protected against positively worthless or harmful ingredients.
>
> The matter is one that touches the health and pocket of every citizen, and legislation looking toward control should not be in the interest, or at the instigation, of any one business or class of citizens, but for the benefit of all.
>
> For the purpose of discussing the situation and of considering the step which should be taken to secure effective and reasonable legislation directed to this end, the undersigned unite in a call for a conference of all citizens and organizations interested, the same to be held at the University of Illinois, Dec. 13, 1898, commencing at 9 o'clock a.m.

Then follow the signatures referred to. Mr. Smith, representing Illinois bee-keepers, has appointed the following as delegates: Dr. C. C. Miller, C. P. Dadant, Jas. A. Stone, and the editor of the American Bee Journal. We regret very much that we were unable to attend. It is utterly impossible for us to leave our office at this time of the year. We trust that something of definite value was done. There is great need of pure food legislation in this as well as many other States.

THE WEEKLY BUDGET

MRS J. J. GLESSNER, of Chicago, has handed us $2.00 to be placed in the Langstroth Monument Fund. Mrs. Glessner is a prominent society lady here, having her bees in New Hampshire, at her summer home. She is greatly interested in the subject of bee-keeping.

MR. G. M. DOOLITTLE, of Onondaga Co., N. Y., has met with a most painful accident, we regret to learn. When sending us his December article for the Bee Journal, on the 7th, he wrote as follows:

> DEAR BRO. YORK:—I had expected to be prompt in sending this last article, sending on the first of the month, but through a fall I sustained one or two broken ribs, and I have found them the most painful, if not the most inconveniencing, of any injury sustained in my life, which has been full of accidents and broken bones. I have scarcely drawn a breath, during eight days, but what has been one of misery. I am now bound up so tight I can hardly draw a full breath, and find that it gives some relief to the pain, caused by the rising and falling of the chest at every breath, which acts directly on the ribs. I was bookt to address the Ontario bee-keepers at their convention Dec. 7 and 8, but had to cancel the engagement, and am staying in-doors the most of the time.
>
> Painfully yours, G. M. DOOLITTLE.

We hope Mr. Doolittle will speedily recover from his severe injuries, and be as sound as he was "before the fall"—of Doolittle.

MR. R. REYNOLD JONES, Secretary of the Vere Bee-Keepers' Association in Jamaica, W. I., wrote as follows Nov. 24:

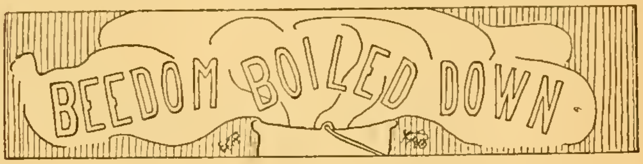
"If we get some fair weather I suppose we shall have a good honey crop. Bees have commenced swarming in some localities."

MR. A. FRITCHMAN, of Cedar Co., Iowa, when renewing his subscription lately, wrote:

"I suppose I am one of the oldest subscribers to the American Bee Journal, as I have been taking it without interruption ever since Mr. Wagner's time."

Mr. Samuel Wagner was the founder of this journal, in 1861. He died in 1872.

MR. THOMAS G. NEWMAN, of San Francisco, Calif., General Manager of the National Bee-Keepers' Union, wrote us Dec. 3 that he was in quite ill-health, suffering from la grippe and malaria. He says the heavy fogs there give to nearly everybody colds and rheumatism—a hard climate. We trust Mr. Newman will soon be himself again. It surely is not pleasant to suffer so anywhere, and especially in a part of the country (California) that has been boomed so highly for its glorious climate!



W. C. Gathright thinks it more important to have separators come ¼-inch below top of sections than to have passages in center of separators; has never seen sections bulged at top, and bees finish up honey and seal top row of cells better than with separators that come to top of sections. I'm anxious to believe he's right, and I think he is. [Notwithstanding I have been on the other side of the fence, and that very recently, enough testimony has come in to convert me to the belief that it is important to have the separators drop ¼ inch below the top of the sections. Our fences for 1899 will be narrow enough to allow this space above and below.—ED.] Gleanings.

Honey the Best Food for Bees.—To every animal belongs its appropriate food, and, for the bee, honey is the food destined by Nature, says W. Skarytka, in Deutsche Ill. Bztg. The bee-keeper deceives himself who thinks sugar is equally good. Honey, and good honey at that, is and always will be the most natural and the best for bees. In emergency, sugar may be used as a substitute, but bees wintered entirely on sugar will not accomplish as much the next season as those wintered on good honey. Honey is directly assimilated, and contains some matters not found in sugar, while the cane-sugar must be inverted by the bees, thus taking their strength at a time when the fullest repose is desirable.

Poor Queens Result from Simply Removing the Queen.—Dr. Miller having maintained that bees made queenless would not make the mistake of rearing a queen from larvæ too old for the purpose, Mr. Taylor, in the Bee-Keepers' Review, thinks his arguments unsound, and is confirmed in that view by his own experience. He says:

"Many a time have I seen the bees beginning attempts to make queens out of larvæ almost old enough to be capt over; and many a queen produced from such larvæ having one or more of the characteristics of the worker have I examined."

"Editor Hutchinson, who has had a large experience in rearing queens for market, says his experience has showed very clearly that poor queens usually result from simply removing a queen and allowing the bees to make their own selection of larvæ for queen-rearing. They are then placed in a position in which nature has never placed them; and in their inexperience it is not surprising they should make mistakes. Henry W. Brice, who has devoted many years to queen-rearing, says in the British Bee Journal that he has proved beyond a doubt that if the bees are left to work their own sweet will in a case of deprivation of their queen, the successor will—saving accidents—be a queen of inferior quality.

* * *

Number of Worker-Cells to the Square Inch.—E. G. Money, in Southland Queen, pokes fun at L. Stachelhausen for carefully showing how to figure the exact number of cells to the square inch, intimating that the amount of honey in a square inch will be the same, no matter what the size of cell. Mr. Stachelhausen replies that the amount of bees reared will not be the same. It is a fact that for many years 50 worker-cells were counted to the square inch, just because no one took the pains to figure out carefully that about 57 cells would be in a square inch of comb, counting both sides. This would make a difference of about 1,000 in the number of brood that could be reared in a frame. It is a good thing to be somewhat exact in our knowledge.

* * *

Buckweed of South Africa.—"The peculiarity of this plant is that it only flowers at intervals of seven years, or thereabouts. Its scientific name, for which I am indebted to a botanist friend, is *Ecteinanthus origanoides*, order *Acanthacea*, and it grows in the bush along the coast, and, under ordinary circumstances, serves as food for buck and cattle, and hence, no doubt, its name. The flower somewhat resembles the nettle in shape, and is white toucht with purple, and is so plentiful that the brush has the appearance of being covered with a slight fall of snow, extending for several hundred miles. The pollen is quite white; the bees, catching it in the head and thorax, pour in as white as millers, and the cappings of sections are very fine. The plant dies off completely after flowering, coming up the following spring as quite a small weed, and gradually enlarging until the seventh year, when it is a good-sized shrub, when the flowers again appear. The honey is of excellent quality, being a fine amber, very clear and thick."—British Bee Journal.

* * *

Small Hives.—While Mr. Dadant is singing the praises of large hives in Gleanings, Mr. Doolittle comes to the defence of small hives in the same paper. The latter uses a Gallup hive with nine frames, these nine having the capacity of 6¾ Langstroth frames. With these he secured each year between 1872 and 1883 from each colony, spring count, an average of nearly 100 pounds of comb honey, a record that he thinks was never equaled by any of the large-hive advocates. While it takes more labor with the small hives, the extra yield pays well for it. He had no more swarming than with 10-frame Langstroth hives, and there was no material difference in the size of the swarms. Sections are put on as soon as any honey comes in from the field, and the combs are manipulated till the whole nine are *solid* full of brood and pollen. Thus the best queen is entertained to her full capacity, and no larger colonies could be obtained with 100 Langstroth frames. The editor suggests that locality makes a difference as to management, and quotes S. A. Niver, 17 miles distant from Doolittle, as saying, "Doolittle's methods may be all right for his locality, but they would not answer at all in this vicinity."

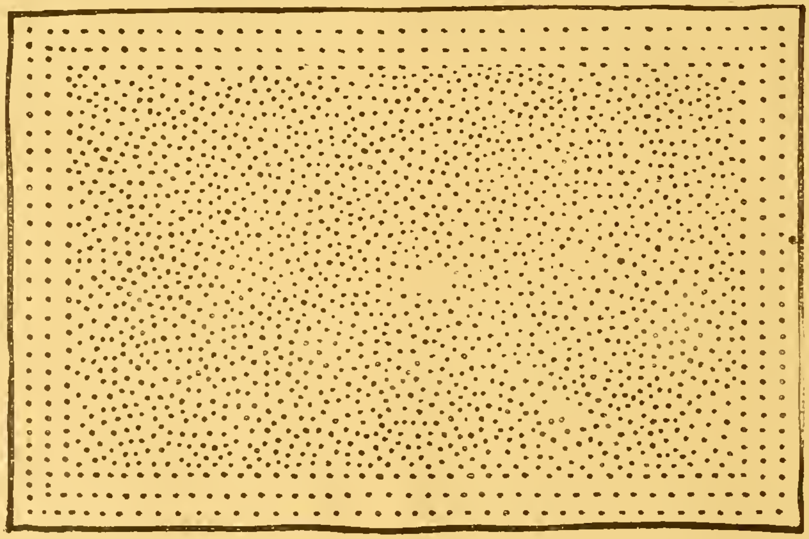
TO BE GIVEN TO OUR READERS

$150.00 IN PRIZES

FOR GUESSING THE NUMBER OF DOTS BELOW:

To those who Are in Arrears.

As an offer to you UNTIL JAN. 1, 1899, you may pay us what you owe on your back subscription, and add $1.00 for next year (1899). This will entitle you to guess on the number of dots in the Puzzle Diagram and compete for the $150.00.



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To those Who are Paid Up

To January 1, 1899, or beyond.

As an offer to you, UNTIL JAN. 1, 1899, you may pay one year in advance on your subscription (send $1.00). This will entitle each one of you to guess on the number of dots in the diagram, and thus compete for the $150. NEW subscribers for 1899 can also come in on this offer, by sending the full subscription price for 1899—$1.00.

In these days of Gifts and Bargains there is no reason why a bee-paper shouldn't be as liberal as other concerns, and the American Bee Journal has determined to show that it means just what it says. We are going to step right to the front with the biggest and best offer that we can make our subscribers. It means that we will give outright to those guessing the number of dots on the above diagram (as above noted) $150 in cash and other prizes.

THE $150.00 WILL BE DIVIDED AS FOLLOWS:

To the one guessing the exact, or nearest the exact, number of dots in the above diagram, **we will give $50.** To the one making the next best guess we will give $25.00; to the next, $10.00; to the next, $5.00. And to the next 60 we will give each a **Globe Bee-Veil,** valued at $1.00. In case two or more guesses are exactly the same, we would divide the cash prizes between or among them. The names of the winners will be publisht in the Bee Journal, and receive their prizes, as soon after Jan. 1, 1899, as they can be determined.

Remember, the time Expires Jan. 1, 1899.

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We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

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White Clover.........	.80	1.40	3.00	5.00
Alfalfa Clover.......	.60	1.00	2.25	4.00
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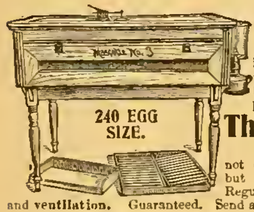

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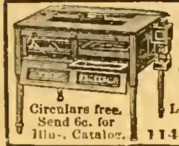

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44A26t Please mention the Bee Journal.

IN COL. BRYAN'S STATE.

At the Omaha Exposition, **First Prize** and **Gold Medal** went to Page Fence. This week, **thirty full cars Page Fence**—solid train—goes to Nebraska farmers. FAIR Exchange?

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Please mention Bee Journal when writing.

GENERAL ITEMS

A Successful Beginner.

To me bee-keeping has proved a most pleasurable recreation and profitable investment. I commenced only last spring by buying some standard books on bee-keeping, and one colony of bees. Later on I subscribed for the American Bee Journal. The bees increast to three strong colonies, with ample stores for the winter—about 40 pounds of honey for each, after yielding 148 pounds of surplus honey, mostly basswood, with some goldenrod in the fall. I consider this a good showing for my bees and for a locality whose people are sometimes accused of using North Poles for firewood.

William Munch.

Polk Co., Minn., Nov. 30.

An Old Bee-Keeper's Report.

From my boyhood days I have had a fondness for bees. I have owned and cared for them every year for 65 years, first in the straw skep, then came the box-hive, next the Week's chamber hive, then the 10-frame Langstroth hive. The last named is what I use, and will continue with until I find something better. I winter my bees in a dry cellar, and run for comb honey. I keep from 40 to 100 colonies. I let each colony swarm but once during the season. I am sure to keep them strong. I never have any to abscond. When I get more than I want I sell or double up. I am living in the city at this time, and have not room for more than 30 or 40 colonies. The past was not a good season for honey. My average was 40 pounds, spring count. I make my foundation, and keep out of the page of "blasted hopes." I am well pleased with the American Bee Journal.

John Cline.

Lafayette Co., Wis., Dec. 2.

Very Poor Season.

Bees did very poorly the past season in this part of the country. I have 39 colonies, and got only about 200 pounds of honey, and enough to winter on besides. There was plenty of white clover, but the bees didn't work on it much. The fall before, the old clover was all killed by the drouth, and I don't think the clover from the seed the first year has much nectar in it. We are looking for a better season next year. We had fall rains.

Darke Co., O., Dec. 1. Noah Thomas.

Getting All Sections Well Filled.

As soon as the honey harvest begins, I commence to put the supers on with nearly full sheets of foundation in the sections, with a few sections that have been left over from the previous year that were partly filled out, which I had fed back to weak colonies. With these the bees will go right to work.

As soon as the first super is two-thirds or about full, place the second super on top of the first one, not under, and so on, and you will get better filled sections and not quarter as many unfinished sections as you will by raising up the first super and placing the second one over the bees. One man can put on twice as many in an hour; besides, he doesn't need any veil or use any smoke. I had three supers on one hive, and they were on until fall, when I took them all off together, which were clean and nice, well ripened, and not traveled-stained a particle. My hives are the 9 frame Langstroth, which I prefer rather than the 8 or 10 frame.

"Why do swarms go west?" has been askt a number of times. Here they go southwest mostly, but sometimes north. I never lost but one swarm that went north. I have taken bees out of five trees this fall, and saw but one that the combs were across

BEES, HONEY, MONEY

Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

J. P. H. BROWN, Augusta, Ga.

Please mention Bee Journal when writing.

WE TRUST THE PUBLIC and send them our Incubator on trial. No man should buy an incubator and pay for it before giving it a trial. You pay not a cent for ours until you have given it a thorough trial. It's made so that nobody can fail with it. A child can run it with 5 minutes attention daily. It beat all others at World's Fair, Nashville and Omaha Expositions. The best catalogue and treatise on Incubation published, sent for 5 cts. Plans for Brooders, Poultry Houses, etc., sent upon receipt of 25 cts.

Von Culin Incubator Co. 5 Adams St. Delaware City, Del.

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PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y.

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IT WILL PAY YOU TO ATTEND THE

Eclectic Shorthand College

Headquarters of the Cross Eclectic System. Lessons by Mail a specialty. Send stamp for alphabet.

94 Dearborn Street, CHICAGO.

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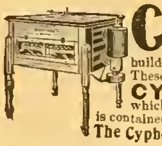
BEE-KEEPERS! Let me send you my 64-page Catalog for 1898

J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing



CHICKEN MONEY and how to get it; how to mate, breed, feed and market poultry. Cuts and plans for building poultry houses and cost of same. These and many other things together with CYPHERS INCUBATOR which is sent freight paid to every purchaser is contained in our Poultry Guide. Sent for 10 cts.

The Cyphers Incb. Co. Box 50 Wayland, N.Y.

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"WATCH POUDER'S AD"

SEE THAT WINK!

Bee-Supplies! Root's Goods at Root's Prices.

Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Cat- tree. Walter S. Pouder,
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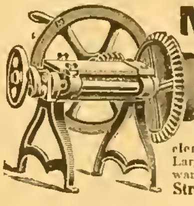
Indianapolis, Indiana.

Please mention Bee Journal when writing.



MAKE 'EM LAY double the eggs in the middle of the winter, when eggs are worth the most money. Hens do that when fed on **green cut bone.** It's best prepared by DANDY GREEN BONE CUTTERS. Made with or without gear. Cut clean, fine and easy. Can't be choked. Largest line made. Ask for what you want. Catalogue and prices free.

Stratton & Osborne, Box 21 Erie, Pa

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ELECTRIC FEED COOKER Nº 2
F.B.W. Co.

Save Half Your Feed

by cooking the other half. Experienced feeders know that this problem works out to a surety. This is not the only gain in cooking feed however. ***All cooked feed is digested*** by the animal economy, and none of it passes through whole. Young things grow more rapidly and mature stock fatten more quickly on cooked feed.

The ELECTRIC FEED COOKERS

are undoubtedly the best for preparing the feed. Made from the **best gray iron castings**, lined with **steel plates**, with **special galvanized steel** boilers. Three styles, five sizes, 25 to 100 gals. capacity. We publish a **FREE BOOK ON FEED COOKING** which tells all about these and deals extensively with the subject of stock feeding. Send for it.

ELECTRIC WHEEL CO., BOX , QUINCY, ILLINOIS.

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......**To have a copy of**......

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Mr. Abbott sells our Hives and Sections at factory prices.

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HONEY ✻ FOR ✻ SALE.

Best White Alfalfa Extracted...

IN 60-POUND TIN CANS.

This is the famous white extracted honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can hardly get enough of the Alfalfa extracted.

Prices are as Follows:

A sample by mail, 8 cents in stamps, to pay for package and postage. By freight—One 60-pound can, 8 cents per pound; 2 cans, 7¾ cents per pound; 4 or more cans, 7½ cents per pound. Cash must accompany each order.

Best Basswood Honey in Barrels.

We have a quantity of finest basswood honey in barrels, weighing 350 pounds and upward, which we will ship f. o. b. Chicago, at 7½ cents a pound. Sample mailed for 8 cents. If desiring to purchase, let us know, and we will write you the exact number of pounds in the barrel or barrels, and hold same till you can send the cash for it by return mail.

Our honey is **ABSOLUTELY PURE BEES' HONEY**, the finest of the kinds produced in this country.

☞ We would suggest that those bee-keepers who did not produce any honey for their home demand the past season, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. Address,

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

Please mention the Bee Journal when writing Advertisers.

the entrance; that was a large one of pure golden Italians, having about 80 pounds of liquid honey. In felling the tree it all smasht together—bees, comb and honey. That honey had no bad taste, or sickish, but was the best I ever tasted.

I put three small swarms into one hive, which were taken from the woods simply by smoking all together. Now they are a nice, strong colony, with stores enough for winter.

My bees are wintered on the summer stands, with a chaff cushion on top of the hives and set in a large box with fine hay or straw packt all around, excepting the front.

I will sell my honey at the stores, and what I can at the houses, for 20 cents a section. I have taken the premiums for the last three years at both town fairs here.

J. M. Harding.

Knox Co., Maine, Nov. 30.

No Swarms and No Honey.

I started last spring with 31 colonies, got no swarms and no honey, but have bought 500 pounds of comb honey and two 60-pound cans of extracted, and have sold it all, and will sell a good deal more if I can get fancy comb at a fair price.

I like the American Bee Journal very much—can't do without it. If I don't get any honey, and have to feed my bees, I can sell honey all the same, even if I have to buy it.

George W. Shearer.

Stark Co., Ohio, Nov. 21.

Only About Half a Crop.

I cannot keep bees without the American Bee Journal. I am wintering 130 colonies this winter—100 in chaff hives well packt with clover chaff, and 30 in the cellar. The bees did not store a pound of honey after the basswood stopt blooming. I got 6,000 pounds of basswood honey—only about half a crop. A total failure is something we have never had in this locality.

This part of the country is well stockt with bees now. I dare say there are at least 1,000 colonies within 10 miles of me. By the first of next June there will be about half that number, on account of the bees not breeding up this fall.

F. B. Farrington.

Page Co., Iowa, Nov. 26.

Bees as Big as Turkeys.

The following story if nothing more is a true one, and I have seen worse ones publisht in bee-papers:

THE BEES OF EUROPE.

Mr. O'Flarety (viewing a modern apiary)—"Yes, but the bees in the ould country are as big as—as—turkeys."

Bee-keeper—"As large as turkeys?"

Mr. O'Flarety—"Yes, as large as—as—turkeys."

Bee-keeper—"How large are the hives?"

Mr. O'Flarety—"Just the same as yours."

Bee-keeper—"But how do they get in?"

Mr. O'Flarety—"That is—is—the bees' business!"

A. L. Thompson.

Winnebago Co., Ill.

Taken a New Hold.

The "Old Reliable" is still coming, not once a month, but every week. What a volume for only $1.00!

Now, as my bees are "put to bed" after a hard and busy season of work is over, and the "bed-quilts" have been drawn snugly around their ears, I will tell what the bee-paper has done for me. Altho we do not hear anything from this part of the Sunflower State, don't imagine for a minute there are no bees here.

A year ago I concluded to make my second start with bees (as I had kept bees in Iowa and Nebraska when I was young). I purchast a colony of blacks in an old box; after transferring they swarmed, and the two gave me 100 pounds of comb honey. During the winter I found I had taken off

A Little Gold Dollar and Our Big Poultry Book

represent about equal value. This book contains every thing that it is necessary to know to succeed in the poultry business. All about **Incubators and Brooders**, the best kind and the best way to handle them; thoroughbred poultry, with illustrations of each breed and a complete line of poultry supplies. We send it to all inquirers on receipt of 10 cents in stamps.

RELIABLE INCUBATOR AND BROODER COMPANY, BOX B 2, QUINCY, ILLINOIS.

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26c Cash Paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **26 cents a pound — CASH** — upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

Ho, for Omaha !

As we have many customers in the Northwest. and believing they will appreciate the low freight rates obtained by purchasing goods from a railroad center nearer to them than we are, getting a direct through-freight rate, thus cutting the freight in half, we have establisht a branch house at 1730 South 13th St., Omaha, Neb., where we will keep a complete line of all Apiarian Supplies, the same as we do at Higginsville, Mo. With the quality of our goods, we believe most bee-keepers in the West are already acquainted. but to those who are not, we will say that our goods are par excellent. Polisht, snowy-white Sections, beautiful straw-colored transparent Foundation, improved Smokers and Honey Extractors, and all other first-clas sgoods, are what we sell. Kind and courteous treatment and honorable dealing our motto. On these bases, we solicit an order, feeling sure that if we sell you one bill of goods you will be our customer in the future.

☞ PROGRESSIVE BEE-KEEPER, 50c per year. "Amateur Bee-Keeper," 25c. Both for 65c., postpaid. Sample copy of the PROGRESSIVE free, and a beautiful Catalog for the asking.

Address, **Leahy Manufacturing Company**, **Higginsville, Mo.,** or **1730 South 13th St., Omaha, Neb.**

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Page & Lyon Mfg. Co. New London, Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

lease mention the American Bee Journal. 7Atf

The Bee-Keeper's Guide

This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published today. Fully illustrated, and all written in the most fascinating style, The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."

Given For 2 New Subscribers.

The following offer is made to PRESENT subscribers only, and no premium is also given to the two new subscribers—simply the Bee Journal for one year:

Send us **Two New Subscribers** to the Bee Journal (with $2.00), and we will mail YOU a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both together for only $1.75. But surely anybody can get only 2 new subscribers to the Bee Journal for a year, and thus get the boo as a premium. Let everybody try for it Will you have one?

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

one of the queens in a honey-box. Last spring I had one good colony, and another almost petered out, but a new queen and careful handling brought them out all right. This colony gave 72 full sections of comb honey. I bought four colonies, and now have 13, all strong, in regular Langstroth hives, and got 500 pounds of comb honey.

We winter bees on the summer stands. About 40 days ago I introduced an Italian queen in a black colony, and thought all was well until the other day, while watching that colony, a fine black queen alighted and marcht in. I think she has been flying out in search of a mate for a good many days, and as there have been no drones for some time, somebody willget an order for a queen quite early in the spring.

We had quite a blizzard last Monday, with the mercury down to zero.

I think every bee-keeper in Kansas should take the "old reliable" American Bee Journal.
S. HARTER.
McPherson Co., Kans., Nov. 25.

Honey Crop Mostly a Failure.

The honey crop was mostly a failure in this part of Missouri. Bees are not in as good condition as they should be, as they are weak in numbers, and some will have to be fed. Clover prospect is good for another year.
P. P. COLLIER.
Audrain Co., Mo., Nov. 20.

A Report for 1898.

My report for 1898 is not encouraging. My apiary consists of 8 colonies, 3 of which stored 20 pounds of surplus honey, and the other 5 have enough to winter on. The 20 pounds of honey was gathered from the quaking-asp bud. It is black and bitter. Only one of my colonies cast a swarm, so I haven't had much fun hiving swarms.

My bees are hybrids, and all colonies are strong. I am just beginning in bee-keeping, but with the aid of my bees, a good text-book, and the "Old Reliable," I hope to make a bee-keeper, some time.
JOHN F. SAUTTER.
Stark Co., Ohio, Dec. 5.

Results of the Past Season.

I like the American Bee Journal ever so much. I could hardly get along without it. I also like the short method of spelling in it.

Bees came through last winter better than ever before. I had 9 colonies, spring count, increast to 14, all strong with the exception of 2. Some colonies stored 56 pounds of surplus honey; others not so much. I use the 8 and 10 frame Langstroth hives, and like them very much.
GEO. O. RENNER.
Carroll Co., Ill., Dec. 4.

No Surplus Honey.

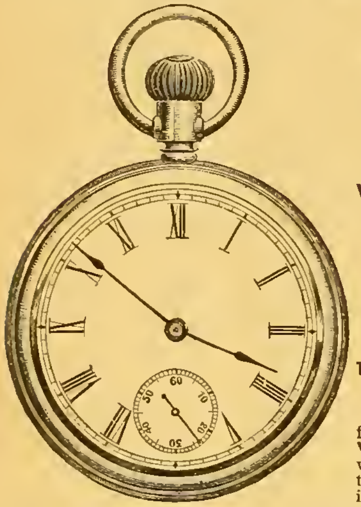
I had 6 colonies of bees during the past season, but they did very poorly, giving no surplus, and part of them have not sufficient stores for winter.

Give us all the information you can on the bee and honey business of Cuba, as no doubt some of our apiarists will investigate if Cuba comes under United States control.
L. G. PURVIS.
Buchanan Co., Mo., Dec. 5.

Winter Cases.

I have constructed a cheap and durable winter-case of dry goods boxes, made of ½-inch pine lumber, costing about 10 cents each, or 70 cents for seven boxes, enough for 11 cases. The box material is cut into pieces 25x22x18 inches high, for a 10-frame hive, which makes 2½ inches for the ends and 3 inches for the sides, with plenty of room for packing on top. The covers are gable, and shingled with shingles costing from $2 00 to $3.50 per thousand; one bunch of 250 shingles will cover six, by cutting the first layer in two, and using the top of

BOYS AND GIRLS



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BY SELLING OUR GOODS.

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WATCHES, CAMERAS, RINGS, SPORTING GOODS, MUSICAL INSTRUMENTS, AIR RIFLES, PRINTING PRESS, ...ETC., ETC....

ABSOLUTELY FREE

For Selling 20 Sets of Aluminum Thimbles and Tape Measures (60 inch) at 10 cents per set.

Two Very Useful Articles, and of Good Quality, for Only Ten Cents.

This is a **reliable, straight** business. Every customer gets full value for their money. We do not ask you for a cent. WE TRUST YOU. Send us your name and address and we will mail the 20 sets to you, post-paid. When you have sold them, send us the Money and select your Premium. Full instructions and Fine Premium List with each Outfit.

OUR SPECIAL CASH OFFER If you prefer to sell for CASH, we will allow you 50% Commission. You make ONE DOLLAR on each Outfit. This is a Great Business Opportunity.

TAKE ADVANTAGE OF IT....WRITE TO-DAY.

Youths' Premium Company, 142 to 146 Monroe St., Dept. "B" CHICAGO, ILL.

☞ The publishers of the American Bee Journal do not hesitate to recommend the above company, and would suggest that the boys and girls in the families of our readers write at once.

Buy Your Sections Now while we offer them at a **LARGE DISCOUNT**, having added to our plant one of the most complete one-piece section machines, enabling us to turn out the most beautiful sections on the market. By sending us a list of Supplies wanted we can save you $$$. **R. H. SCHMIDT & CO.**, Box 187, SHEBOYGAN, WIS.

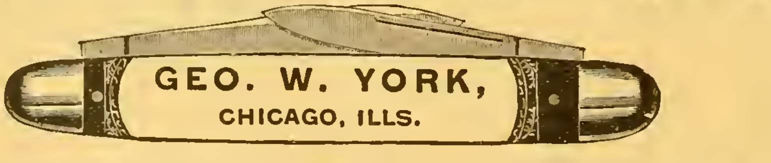
FREE FOR A MONTH.

If you are interested in sheep in any way you cannot afford to be without the best and only weekly sheep paper published in the United States.

WOOL MARKETS AND SHEEP ☘ ☘ ☘ has a hobby which is the sheep breeder and his industry, first foremost and all the time. Are you interested? Write to-day

Wool Markets & Sheep, - - Chicago

THE "NOVELTY" POCKET-KNIFE!



Your Name on the Knife.—When ordering, be sure to say just what Name and Address you wish put on the Knife.

The NOVELTY KNIFE is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed an AMERICAN BEE JOURNAL reminder, and on the other side, name and residence of the Subscriber.

The material entering into this celebrated knife is of the very best quality; the blades are handforged out of the very finest English razor-steet, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring steel, and the finish of handle as described above. It will last a lifetime, with proper usage.

Why purchase the Novelty Knife? In case a good knife is lost, the chances are, the owner will never recover it; but if the Novelty is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelties, your pocket KNIFE will serve as as an identifier; and in case of death, your relatives will at once be apprised of the accident.

How appropriate this knife is for a Christmas, New Year or birthday present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, a lady to a gentleman, or vice versa, a son to a mother, a husband to a wife, a brother to a sister or a gentleman to a lady—the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid, for $1. , or give it as a Premium to the one sending us **three new Subscribers** to the BEE JOURNAL (with $3.00), and we will also send to each new name a copy of the Premium Edition of the book "Bees and Honey." We club the Novelty Knife with the BEE JOURNAL for one year, both for $1.90

Any Name and Address Put on the Knife. GEORGE W. YORK & CO., CHICAGO, ILLS.

the shingle first, and the butt for the last layer. This makes a cover that does not leak. The odd pieces cut from the sides and ends of course can be nailed to the cleats on the bottom-board (I use a loose bottom-board), and makes a packing for the bottom. I have wintered my bees thus for two winters with good results.

F. E. WHITMAN.

Cayuga Co., N. Y., Dec. 3.

A Beginner.

I am a beginner in bee-keeping, getting my first swarm last spring. I increast to 4 colonies, all by natural swarming.

IRA LUBBERS.

Sheboygan Co., Wis., Des. 5.

Bees in Good Condition.

Bees were placed in the cellar for their 5 months' winter nap Nov. 22—about a week later than usual. Most of them were in good condition.

The best apparatus for liquefying candied honey, in my opinion, is a hot buckwheat cake.

JOHN ATKINSON.

Crow Wing Co., Minn., Dec. 5.

Report for 1898.

I wintered 18 colonies in good shape in a cellar. The spring was quite late, so I did not take the bees out until about the middle of April. I commenced feeding soon after taking them out, and fed every day until clover began to bloom. I used the Boardman entrance-feeder. I like it very well except that sometimes the feed will run right out, no matter how level you get it. I fed 100 pounds of sugar and 50 pounds of honey.

I got 400 pounds of extracted and 200 pounds of comb honey. Our honey is all white clover and basswood, there being no fall flow. I increast to 27 colonies, which I put into the cellar Nov. 30. Some were a little light, the ones I extracted from.

The honey crop here was very poor. There are quite a number of bee-keepers around me, and some of them didn't get a pound of surplus.

G. H. FREY.

Linn Co., Iowa, Dec. 6.

Convention Notice.

The 32nd semi-annual meeting of the Seneca County Bee-Keepers' Association will be held at K. O. T. M. Hall in Romulus, N. Y., Thursday, Dec. 22, 1898, at 10 a.m. The program is as follows:

President's Annual Address—Fred S. Emens.

"How to Preserve Unused Combs"—M. T. Williamson; discussion opened by Henry Manger.

"Packages for Honey"—Herbert McAllen; discussion opened by B. D. Scott.

Question-Box, conducted by Harry Howe.

"How to Extinguish Foul Brood from the State"—W. F. Marks; discussion opened by Shuman R. Kunes.

"Marketing Honey"—Ira Wilson; discussion opened by J. C. Howard.

"Improved Appliances"—C. J. Baldridge; discussion opened by E. N. Van Riper.

"Bees and Clover"—J. W. Spencer, of Cornell University.

"Best Method of Increase"—George V. Lamoreaux; discussion opened by Natt Sutton.

FRED S. EMENS, Pres., Fayette, N. Y.
C. B. HOWARD, Sec., Romulus, N. Y.

FARM BEE-KEEPING

Is one of the leading departments in the **Modern Farmer and Busy Bee**, the best general **FARM** and **BEE** paper in existence. Write for sample copy to-day, and for clubbing rates with any paper you want. Address,

Emerson T. Abbott, St. Joseph, Mo.

A LOW CLUBBING RATE;

Send $1.50 to the American Bee Journal office, and get both the Modern Farmer and the Bee Journal for a year. G. W. Y. & CO.

BEE-BOOKS

SENT POSTPAID BY

George W. York & Co.,

Chicago, Ills.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—This edition has been largely re-written, thoroughly revised, and is "fully up with the times" in all the improvements and inventions in this rapidly-developing pursuit, and presents the apiarist with everything that can aid in the successful management of an apiary, and at the same time produce the most honey in an attractive condition. It contains 250 pages, and 245 illustrations—is beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, $1.00.

Langstroth on the Honey-Bee, revised by Dadant—This classic in bee-culture, has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages; bound in cloth.

Price, postpaid, $1.25.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof A. J Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages; bound in cloth and fully illustrated.

Price, postpaid, $1.25.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of Queen-Bees are reared in perfect accord with Nature's way. 176 pages, bound in cloth, and illustrated. Price, $1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopædia of 400 pages, describing everything pertaining to the care of the honey-bees. It contains 300 engravings. It was written especially for beginners. Bound in cloth. Price, $1.25.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is too well known to need further description of his book. He is a practical and entertaining writer. You should read his book. 90 pages, bound in paper, and illustrated. Price, 50 cts.

Rational Bee-Keeping, by Dr. John Dzierzon—This is a translation of his latest German book on bee-culture. It has 350 pages; bound in paper covers, $1.00

Bienen-Kultur, by Thomas G. Newman.—This is a German translation of the principal portion of the book called BEES OF HONEY. 10_ page pamphlet. Price, 40 cents.

Bienenzucht und Honiggewinnung, nach der neuesten methode (German) by J. F. Eggers. This book gives the latest, most approved methods of bee-keeping, in an easy, comprehensive style, with illustrations to suit the subject. 50 pages, board cover. Price, 50c.

Bee-Keeping for Beginners, by Dr. J. P. H. Brown, of Georgia. A practical and condensed treatise on the honey-bee, giving the best modes of management in order to secure the most profit. 110 pages, bound in paper. Price, 50 cents.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 p., illustrated. 25c.

Convention Hand-Book, for Bee-Keepers. Thomas G. Newman.—It contains the parliamentary law and rules of order for Bee-Conventions—also Constitution and By-Laws, with subjects for discussion, etc. Cloth, gold-lettered. Price, 25 cts.

Practical Hints to Bee-Keepers — by CHAS. F. MUTH. Also contains a Foul Brood Cure and How to Winter Bees. 40 p.; 10 cts.

Apiary Register, by Thos. G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00; for 100 colonies, $1.25.

Preparation of Honey for the Market, including the production and care of comb and extracted honey. A chapter from BEES AND HONEY. Price, 10 cents.

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Winter Problem in Bee-Keeping, by G. R. Pierce. Result of 25 years' experience. 30 cts.

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Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price 10 cts.

Hand-Book of Health, by Dr. Foote.—Hints about eating, drinking, etc. Price, 25 cts.

Honey as Food is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey among should-be consumers. The forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 30 cents; 50 for 50 cents; 100 for 90 cents; 250 for $2.00; 500 for $3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

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(Read Carefully.)

The following clubbing prices include the American Bee Journal one year with each book named. Remember, that only ONE book can be taken in each case with the Bee Journal a year at the prices named. If more books are wanted, see postpaid prices given with the description of the books on this page. Following is the clubbing-list:

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37.	Apiary Register (for 50 colonies)	1.75
38.	Apiary Register (for 100 colonies)	2.00

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Dec. 8.—Our market is less active. There are now more offerings of comb honey than is absorbed, hence some accumulation of consignments without any special change in prices; yet receivers are granting concessions to move sales. Fancy white, 13c; off grades, 10@12c; amber, 9@10c; dark, 8@9c. Extracted, white, 6@7c; amber and dark, 5@6c. Beeswax, 27. R. A. BURNETT & CO.

Detroit, Dec. 8.—No change in supply of honey as to quality, but prices are somewhat lower than last quotations, viz.: Fancy white, 13c; No. 1, 12@12½c; fancy dark and amber 9@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

Columbus, O., Dec. 6.—Prices have been so high, movement has been so slow, and lower prices must prevail to move stock readily. Would not advise shippers to count on getting over 13c for fancy; No. 1, 12c; No. 2, 10c; amber, 9c; dark, 8c.

COLUMBUS COM. AND STORAGE CO.

St. Louis, Sept. 9.—Fancy white comb, 12 to 12½c.; A No. 1 white, 10 to 11c; No. 1 white, 9 to 10c.; dark and partially-filled from 5 to 8c, as to quality. Extracted in cases, No. 1 white, 6 to 6½c; No. 2, 5½c; amber, 5c; in barrels, No. 1 white, 5½c; amber, 4½ to 5c; dark, 4 to 4½c. Choice Beeswax, prime, 24c; choice, 24½c. At present there is a good demand for honey. WESTCOTT COM. CO.

Kansas City, Sept. 9.—Fancy white comb, 12@13c; No. 1, 11@12c; amber, 10@11c. Extracted, white, 5½@6c; amber, 5@5½c; dark, 4½@5c. Beeswax, 22@25c.

The receipts of comb honey are larger.

C. C. CLEMONS & CO.

Milwaukee, Oct. 18.—Fancy 1 pounds, 12½ to 13c; A No. 1, 12 to 12½c; No. 1, 11 to 12c; No. 2, 10 to 10½; mixt, amber and dark, 8 to 9c. Extracted, white, in barrels, kegs and pails, 6½ to 7c; dark, 5 to 5½c. Beeswax, 26 to 27c.

This market is in good condition for the best grades of honey, either comb or extracted. The receipts of the new crop are very fair, and some of very nice quality. The demand has been and continues to be very good, and values are firm on fancy grades and straight, uniform packing. A. V. BISHOP & CO.

New York, Oct. 22.—Receipts of comb honey are large, and there is quite a stock now on the market. While white is in good demand, buckwheat and mixt seem to be somewhat neglected, and quotation prices have to be shaded in order to sell in quantity lots: We quote:

Fancy white, 13 to 14c; No. 1 white, 11 to 12c; amber, 10c; mixt and buckwheat, 8 to 9c. Stocks of extracted are light of all kinds. Demand is good at following prices: White, 6 to 6½c; amber, 5½c; dark, 5c. Southern, in half barrels and barrels at from 55c to 60c a gallon. Beeswax dull at 26c.

HILDRETH BROS. & SEGELKEN.

Buffalo, Nov. 25.—A most excellent demand continues for strictly fancy 1-pound combs at 13 to 14c. The usual so-called No. 1, 11 to 12c; lower grades move well at from 9c down to 7c; stocks very light in our market. Extracted honey, 5 to 6c. Beeswax, 24 to 28c.

BATTERSON & CO.

San Francisco, Nov. 22.—White comb, 9½ to 10½c; amber, 7½ to 9c. Extracted, white, 7 to 7¼c.; light amber, 6¼ to 6½c. Beeswax, 24@27c

Stocks in this center are light and must so continue through the balance of the season. Choice extracted is especially in limited supply and is being held at comparatively fancy figures. Comb is meeting with very fair trade, considering that it has to depend mainly on local custom for an outlet. Values for all descriptions tend in favor of selling interest.

Boston, Nov. 28.—Liberal receipts with but a light demand during the holidays. As a result stocks have accumulated somewhat, and prices show a lowering tendency, still we hope for a better demand with prices at present as follows:

Fancy white, 14c; A No. 1 white, 12½ to 13c; No. 1, 11 to 12c; light amber, 10c, with no call for dark. Extracted, fair demand, light supply: White, 7 to 7½c; light amber, 6½ to 7c; Southern, 5 to 6c. BLAKE, SCOTT & LEE.

Cleveland, Nov. 29.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

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38th Year. CHICAGO, ILL., DECEMBER 22, 1898. No. 51.

CONVENTION PROCEEDINGS

UNITED STATES BEE-KEEPERS' UNION.

Report of the 29th Annual Convention Held at Omaha, Nebr., Sept. 13-15, 1898.

DR. A. B. MASON, SEC.

SECOND DAY—EVENING SESSION.

[Continued from page 789.]

The evening session was called to order by Pres. York, and was opened by singing two songs, "The Busy Buzzing Bees," and the "Bee-Keepers' Reunion Song."

Pres. York—We have all read somewhere that the first shall be last and the last shall be first. The first thing upon our printed program is a paper by Rev. E. T. Abbott, on "General Advice to Bee-Keepers." He was not here at our opening session, but has arrived now, and I think we should hear his paper at this time. Mr. Abbott, of Missouri.

General Advice to Bee-Keepers.

I do not know how Secretary Mason came to assign me this topic, for it was none of my choosing. In fact, I did not have any idea that I was to be on the program until I received notice that I must be on hand with a paper on the above subject. As I make it a point to obey the orders of my superiors, I could not do better than prepare the paper. The truth of the matter is, however, that Dr. Mason has struck me just right, for if there is anything on which I am strong, and at my best, it is in giving advice. True, I am compelled many times to say, in the language of the traditional preacher, "Do as I *say*, and not as I *do*." However, let this be as it may, I am immense on advice. I am with advice as the doctor said he was with fits, when reminded that the drug he was using was likely to produce them. He responded, using a word which is usually written with an h, a dash and an l, that he was that on fits, and that was all right. He was safe if he could only throw his patient into fits, for he could cure them. Now, that is the way I am on advice.

Perhaps it was a little oversight in the Maker of all things that I was not brought into being early in the history of mankind, and made a sort of "director general of advice." Possibly I might have saved some people a good deal of trouble, even tho it should have been at the risk of getting myself into worse trouble. For I want to tell you, that giving advice is not always the safest thing in the world. Many times those who need advice the most are inclined to resent it, and get "hot," as we say, if it is given to them, and a "hot" man, or woman either, for that matter, is not always an agreeable person to deal with.

But, as the preacher would say, "To return to my subject."

The first advice I have to give is, not to wait until you get into some trouble with your neighbors, and want some one to help you out, before you think of joining the United States Bee-Keepers' Union. For if you do, you may not always get the help you need. "In time of peace, prepare for war," for sometimes being "prepared for war" will enable you to keep the peace better than anything else.

Having joined the Union, never ask its General Manager to do anything for you which you can just as well do for yourself. Before you ask for help at all, read the constitution of the Union carefully, and be sure you understand its aim and purpose fully. Remember that it is no part of the Union's business to meddle with neighborhood or family difficulties, even tho there may be something about bees mixt up with them. Do not ask the Union to aid you against your neighbor simply because you have a purely personal spite at him, and you think this will afford you an opportunity to "bring him to time." Nearly all of these personal difficulties can, and should, be settled without any help from the Union.

Do not expect too much of the Union at the start, or because you have paid your dollar for a few years, and not needed or gotten any help, conclude that you will save your money and not continue your membership. Fire comes when you least expect it, and for that reason a wise business man keeps his property insured all the time, and considers that the feeling of security which he has is abundant pay, even tho the fire may never come.

Rev. Emerson T. Abbott.

You should remember also that a strong Union is a benefit to the industry as a whole, and even tho you may not want direct personal aid, yet you will indirectly be benefited, for whatever benefits the whole works more or less benefit to each individual part.

Do not get the notion that the Union is a sort of trust to force up the prices of honey, for when one man gets more for a thing, several men generally have to pay more for it. One trust is just as wicked as another. If it is wrong to corner wheat, flour, nails, oil, lumber, etc., it is just as wrong to form a pool on honey. It is all right to open new markets, create new demands, in various ways, or to aid in diverting the crop to other and more profitable markets, but no union should form itself into a trust to regulate the price of food products. This should be left to demand and supply, whether the food be honey or something else. Those who attempt anything of the kind are enemies of society. Do not join in the general hue and cry about the useless middle-man, and swear he lives off of other people's labor. Remember that whoever satisfies a desire is a producer, and that the man who opens a market is as much entitled to pay, for his labor, as the man who helps the bees produce a case of honey. There will be tradesmen as long as the world stands, and, according to the theory of the evolutionist, that which survives is the fittest.

Do not conclude that it is because something is out of joint politically that you get such a low price for your honey, or have such a hard time in the world. There has been something out of joint in this direction as long as I can remember. The "outs" have always laid all of the trials and tribulations of the people to the "ins," and the "outs" have wanted in, and the "ins" have wanted them to stay out. I presume this will be true until the "blowing of the last trumpet," if one ever blows, and then we will all want to get *in*, I presume. Some may be left *out* even then. I cannot say how that will be.

If you are a beginner in the bee-business, do not think you need everything you see advertised. Things are made to sell in this business just the same as in others, and sometimes the people who buy them "get sold." The more experience you have with bees the more you will discover that there are a lot of things you do not want. Go slow on the new things, and let the other fellow do the experimenting.

If you take a bee-paper—and you should if you ever want to find out how wise some of the fellows are who write for them—do not sit down and write the editor a long letter, the first time you see anything in the paper you like, and tell him what a smart fellow he is, and what a splendid paper he is making out of the "Apis Dissectum." He may say some things you do not like in the next issue, and then you will want to take it all back, but you can't. What is done is frequently harder to undo than it was to do. Then if you give a testimonial to every pillmaker, you may run out of new material in time.

Do not try to run the paper for the fellow who owns it. He may have had more experience than you have. If he has not, and you are real anxious to show what you can do, you would better start a paper of your own. "Always room at the top," they say; but I have noticed that some things are real shaky at the top—a tree, for illustration. It would be better to go a little slow until you get your hand in, and your nerves a little steady. Be very mild and gentle, especially with editors and cross bees. Do not provoke them to use their posterior extremities too much, as it might prove injurious to them, and uncomfortable to you. It is apt to create a sudden sensation of heat.

If you have a little success, don't brag or tell what big things you have done. It may bring you more competitors than will be good for the business. Let the supply dealers and the factory people do the bragging. They can tell, if they wish, of tons and tons of stuff they have sold, and how they started with a 10-cent knife and an old shoe-box, and have grown and grown until now they cover acres. It is true this may induce more fellows to try the factory business, but that will not hurt you. "Competition is the life of trade," but some fellows seem mighty dead at times who get too much of it.

Do not tell all you know, for if you do the other fellow will know just as much as you do, and it is not well to know too much. It makes one's head tired to carry so much wisdom, and, then, if people find out a fellow knows a lot, they are all the time wanting to have him tell it, and he cannot find time to do anything else.

In conclusion I would say, be contented with your lot, but not too contented—no progress in that. Be enthusiastic, but not too much so. One feels so badly when he gets all the enthusiasm knockt out of him, as he does at times. Be honest, but do not say too much about it. People may think you are "off" if you do. Be kind to the bees, for if you don't you may wish you had.

If you have not joined the Union do not discuss this paper, for only members can vote. Better give the Secretary a dollar and make him promise never again to ask me to give "general advice to bee-keepers." EMERSON TAYLOR ABBOTT.

There was no discussion of Mr. Abbott's paper.

BEE-STINGS AND RHEUMATISM.

"Are bee-stings a cure for rheumatism?"

A. I. Root—For some kinds of rheumatism.

Mr. Whitcomb—I have never known a person to have rheumatism so badly but that he could get up and "git" if a bee stung him.

Dr. Peiro—I could tell you what I don't know about it a great deal easier than I can tell you what I do know. Bee-stings are said to be a cure for rheumatism; it is used in some cases. But I want to tell you a little personal history. This is no joke. When I get a little deprest, either from working or some other miserable thing, I go out and consult the bees. I fuss with them a little bit, and they come and give me a warm reception, and for several days after that I really feel a lot better. I would advise you, when you get a little deprest, and get to feeling sort of "off," go and consult the bees, and let them give you a few good, red-hot ones, and you will be all right.

Dr. Mastin—I have been troubled a little with rheumatism in the past, and have been stung a good many times in the last year or so, and have not felt any rheumatism since then. I don't know whether the bees had anything to do with it or not, but I suppose they had.

Mr. Danzenbaker—I have rheumatism. I think I came by it honestly; my grandfather died with it, and my father suffered with it all his life—it shortened his life. I can't remember the time when I haven't felt it, from childhood. I have been keeping bees a good many years. Last spring I felt the rheumatism. I went to work with the bees in March, and I got stung a little more than usual. I was with the bees from March until August; I think I got stung on an average three or four times a week. I got rid of the rheumatism. I have not done anything for it; if I have had any remedy, I think it is bee-stings. If I should not handle bees for two or three months I should feel the rheumatism again.

Dr. Mastin—Bee-stings are not commonly recommended in the text-books as a remedy for rheumatism. The patient might think the remedy worse than the disease.

Dr. Miller—About seven years ago a hive that I was holding slipt, and the bees got out, and I received the worst stinging I ever had in my life; and I have never had any rheumatism since.

A Member—Did you ever have it before?

Dr. Miller—No, sir. [Laughter.]

Dr. Mason—I have had rheumatism more or less for a great many years, until two years ago last April I had an attack in my hip which gradually went down the limb and got into my instep. I suffered intensely. I had to give up for three weeks, and then went around two weeks more with crutches, then with a crutch and a cane, scarcely daring to touch my foot to the ground. I had let my bees on shares because I was unable to take care of them myself while I was in that condition, and one day I was out in the yard sitting down when out came a swarm, and while watching for the queen I was stung two or three times on the instep; in five minutes I laid away my crutch and cane, and haven't had a particle of pain since—no pain in that foot at all, but it left a sensation of numbness, and for a whole year after that I would frequently stub my toe in walking, as a result of that sensation, and I feel confident that the use of electropoise cured the numbness; perhaps bee-stings would have cured it.

Dr. Miller—The testimony that has come from different sources has been so much that it cannot be overlookt. There must certainly be some cases in which bee-stings have helpt rheumatism. But I will tell you what I think about these reports of cures: We will find reports here and there from some who has tried it and been successful, and another will report that he has tried it and received no benefit. I suspect that about every successful case will be reported; but if I try it and it is not successful, I am not so likely to report it. In the majority of cases I am inclined to believe it has no efficacy whatever; but in some cases it does have its effect. If I had a bad case of rheumatism, I certainly would try bee-stings.

Mr. Abbott—I belong to that class of people who inherit rheumatism. It has been in my family as long as I know anything about it; all have been crippled up with it more or less. Every brother and sister I have has been laid up with it at times for weeks, when every time they would move a limb they would scream with pain. I have myself suffered tortures enough to kill several big, fat men. But about 20 years ago I began to handle bees, and 15 years ago I began to handle them on a large scale, and I have had hardly a hint of rheumatism since. I have not been an absolutely well man, as I have had other troubles. I have never had a rheumatic pain that I know of since I began to handle bees. When I first began handling them, if I was working with them all the time I would have no rheumatism, but if I would stop for awhile I would have the rheumatism again. For four or five years during the winter I would have it a great deal, but in the spring it would get well. I do not know whether it was the bee-stings or not; but the rest of my brothers and sisters who do not handle bees are still tussling with rheumatism. My elder brother has been disabled about half the time, and they all have trouble with it but myself. I do not know whether it is the bee-stings or not that workt the cure.

Secretary—(Why doesn't Mr. Abbott manage somehow to get some bee-stings into those suffering brothers?)

A. I. Root—It might be well to mention the fact that we have sold bee-stings in the past to a medicine manufacturing institution—a considerable quantity of bee-sting poison.

The Annual Report of General Manager Secor was then read by him, as follows:

Report of the General Manager of the United States Bee-Keepers' Union.

It is considered one of the legitimate purposes of this society to promote legislation in the interest of bee-keepers.

Acting on that idea the Executive Committee appointed three delegates to attend the Pure Food Congress held in Washington, D. C., beginning March 2, 1898. The delegates consisted of E. T. Abbott, of Missouri, Dr. A. B. Mason, of Ohio, and your humble servant, the General Manager.

The object of the Pure Food Congress was to unite all the producers and all the manufacturers of food products, and all societies and people that believed in the necessity or desirability of protecting the public against adulteration and misbranding, on the common ground of honesty in the preparation and marketing of all articles intended for food, drink or medicine, consumed by man.

Believing that in no other way could this society speedily and effectually bring about the results it was seeking to achieve, Mr. Abbott and myself attended that convention.

We were greatly pleased, not only with the number of delegates present, but the representative character of the men: Scientists of national reputation, leading physicians and pharmacists, pure food commissioners from many of the States, intelligent and progressive farmers; representatives of wholesale and retail grocery and confectionery associations, and many other organizations and interests were represented by able and earnest delegates—solely in the interest of purity of all articles of human consumption.

What was accomplisht at that Congress is more fully explained by Mr. Abbott in his paper, The Busy Bee, and copied in the American Bee Journal of March 31, page 200, and my own report publisht in the last-named paper on page 216.

I think the National Congress has not yet acted on the Bill which it has thought best to urge.

All acquainted with National legislation will understand that its Acts are seldom rusht through without a good deal of discussion, both useful and useless.

After the Brosius Pure Food Bill was amended and perfected by the Pure Food Congress, it was again introduced in the National House and referred to the Inter-State and Foreign Commerce Committee. As soon as I learned this fact I addrest the chairman of that committee, who happens to be from my own State, the following letter, using the printed letter head of the United States Bee-Keepers' Union:

> Hon. William P. Hepburn—
>
> Chairman of Inter-State and Foreign Commerce Committee.
>
> *Dear Sir:*—I believe the Pure Food and Drug Bill introduced by Mr. Brosius, March 15, 1898, was referred to your Committee. If so, may I be allowed to urge you to use your influence to enact it into law at the earliest opportunity?
>
> I had the honor to be a delegate to the Pure Food Congress held in Washington, March 2 last, and the Bill now before the National Congress was gone over very carefully by a committee representing about every organization interested in the purity of our manufactured food products. Possibly there may be some crudities in the Bill, but I am persuaded that something of the nature and intent of this Bill ought to be on the Statute books.
>
> I represent an industry that has suffered greatly from adulteration fraud. The purest and best sweet ever given to man—a sweet distilled in Nature's own laboratory—a sweet digested with less effort than any made by man—a sweet that may be counterfeited, but never successfully imitated—honey, has been degraded by glucose syrup until the bee, like Othello, finds her occupation gone.
>
> If the waning of the honey industry, and the consequent loss of occupation to a worthy class of the rural population were the only consequences caused by the glucose flood of adulteration it would not be so bad; but it must be understood that bees play an important part in the economy of Nature aside from the honey stored, which we appropriate for our own use. The fruitfulness of the whole country depends largely on the pollinating assistance rendered by this useful insect, and if bees are allowed to perish for want of encouragement to their keepers, the fruits and flowers, the vineyards and gardens, will suffer also.
>
> But we can't produce honey in competition with liquid glucose sold under the guise of honey.
>
> All we ask is honesty in branding and labeling packages; then if people prefer corn syrup with one-half the sweetening power of honey, to honey itself, all right.
>
> We have no war to wage on any other industry, and only ask an open field and fair competition, protected against fraud.
>
> We shall be glad of your influence. Yours truly,
>
> Eugene Secor.
>
> On behalf of bee-keepers producing nearly 100,000,000 pounds of honey annually.

I hope every bee-keeper who has not already done so, will write an appeal to his Congressman in behalf of the Brosius Bill, or in the interest of pure food legislation. A hundred letters by a hundred different persons will do a world of good.

Please don't expect me or any other representative of this society to write an appeal to your political representative that will be as effective as a letter from you. A line from one of his constituents will attract his attention at once.

In April last I got a letter from Frank Gilmore, Watertown, Conn., enclosing a letter from a law firm of his town in which Mr. Gilmore was notified to remove his bees within 15 days under a threat of prosecution and injunction. The complaint was, that the aforesaid bees destroyed the entire crop of peaches, rasberries and other fruits on the promises of a neighbor; that they stung horses and visitors. I gave Mr. Gilmore such advice as I thought best, and presume he escaped the clutches of the law, as I heard nothing further of the case.

During the same month, Mr. B. Baldwin, of Mexico, Mo., sent me an account against a Chicago commission-house, saying he could get no pay for honey billed to the firm. I at once began correspondence with the commission-men, and after a couple of letters got a draft in full. Mr. Baldwin exprest himself as entirely satisfied with the transaction, and donated to the Union two years' membership in advance.

Ed Gerould, of East Smithfield, Pa.,, was threatened trouble from a neighbor who was determined to spray his peach orchard while in full bloom, altho it had been explained to him that by so doing his neighbors' bees might be poisoned. Mr. Gerould wrote me for advice and help. I sent him some printed matter and advised him how to proceed, which was the last I heard of the matter.

Chas. Haise, a quiet, peaceable, unoffending person who lived in Atlanta, Ill., received from the marshall of the town the following notice in June, 1898:

> "Sir:—You are hereby notified that your bees, situated and kept on the premises now occupied by you, have become and are a nuisance to the neighborhood and public, and you are hereby notified to abate, remedy, or remove the same immediately as provided by ordinance. A failure to do so will subject you to a penalty of not less than $300.

The Union was appealed to by Mr. Haise and his neighbor bee-keepers. The trial had been already set, and only three days remained in which to get my advice to him regarding a plan of defence. But it proved sufficient. The case was dropt when the prosecutor found an organization with money, courage, and *law* behind the defendant. The bee-keepers interested exprest their gratitude for the prompt and efficient aid rendered by the Union, and said they believed the case was dismist because of its assistance. An effort was made before the Western Classification Committee to rescind the rule instructing all railroad agents to refuse bees by freight in less than car-lots. I put up the best argument I could think of by letter, but failed. The rule still stands, I believe. Mr. Aikin appeared before the committee by request of the President, for the same purpose. If the matter is of any importance to bee-keepers it can be taken up at another time; perhaps we may be more successful next time.

My correspondence with bee-keepers other than the ones mentioned above has been considerable. Appeals to the Union for help have not been confined to the cases cited. Advice and assistance have been given whenever in the judgment of the General Manager good could be accomplisht thereby, and if the funds on hand warranted action.

Important matters have always been referred to the Board of Directors, if time permitted, and the nature of the case seemed to render it advisable. No money has been paid out except upon approval of the Board.

A full statement of the financial condition of the society will be mailed to all members at the close of the year.

Eugene Secor.

Mr. Whitcomb—I move that the report of the General Manager be accepted, and that the thanks of the Union be extended to Mr. Secor for his labors in our behalf.

The motion was seconded and carried by a unanimous vote.

Mr. Abbott—I do not exactly want to make a motion, but I will make a suggestion first. I want to suggest that it would be a good idea if the General Manager would prepare a form of such a letter as would be good for the members to send to their congressmen. There are a good many people who are not acquainted with the forms and methods of addressing public men, and they would shrink a little from sitting down and addressing their congressmen themselves, when if there was a form already prepared they could simply put their names to it and send it in. I have been informed by the vice-president of the Pure Food Congress that owing to the war the matter was crowded out of the last Congress. Doubtless there would have been favorable reports from the committee in both houses, but the excitement of the war came on, and it was crowded out. There is no question but what the next Congress will take the matter up. If we would take it up as individuals in connection with the efforts of the General Manager, I think that would aid materially in securing the passage of the law. The Busy Bee is perfectly willing to give the General Manager all the space he wants for the publication of such a letter, and I have no doubt the other bee-papers of the United States would be glad to do the same. I believe that would be very helpful. If it is considered worth while, I would move that the General Manager be requested to prepare such a letter.

The motion was then seconded.

Mr. Secor—My object in copying my letter to Mr. Hepburn, the chairman of that committee, was particularly to let you know how I addrest a congressman on the subject. You will also remember that in my report last spring to the Washington congress, I did give a copy of a letter that I had formulated, and suggested that those who could not do better should send to their congressman such a letter. Of course, I shall be willing to do what I can to aid in the matter.

Dr. Miller—It may be that a form of letter as long as our General Manager's is not likely to be copied by a great many. I think we should have something quite short and to the point; if it doesn't take a great deal of time to re-write it, the members would be more likely to do it. I believe that such a letter would be very useful, indeed. I have just tried to think of myself as trying to write a letter of that kind. The chances are that I would put it off from day to day, and that it would not get written at all. If Mr. Secor would fix one up that would cover the case, I think I would take the time to copy it. Some one near me suggests that the letters would be too much alike; but don't forget this, that instead of one man getting the whole lot, a whole lot of men will get one letter each, and the chances are that they are not going to compare their letters.

Mr. Danzenbaker—I do not fear the effect of their being all alike. If you were to clip a printed article out of a paper and write that you fully endorse it and that you desire your congressman's influence, and put your name to it, that is enough. He will read it and heed its contents as much as if you wrote it out yourself.

FREIGHT RATES ON BEES IN LESS THAN CAR-LOTS.

Pres. York—There is no doubt that such letters have great influence. I would like to ask how many knew some time ago that there was an effort going to be made to reduce freight-rates on bees in less than carloads. How many knew that, in time to write to the chairman of the Classification Committee?

Six hands were raised in answer to the President's question.

Pres. York—Now I would like to know how many of you wrote such letters.

Three hands were raised in answer to the last question.

Pres. York—I saw the private secretary of the chairman of the Classification Committee, and he told me that few bee-keepers had shown any interest at all in the matter. There would have been a good chance for its passage, but there were only a few letters that came in endorsing the change, and that was a very strong reason why nothing was done with it. There were some freight handlers on some northern road that said they were afraid of bees, and as the bee-keepers had shown so little interest the matter was simply pigeon-holed.

Mr. Lathrop—It was the Wisconsin Bee-Keepers' Association that first made an effort to get that change made, and we expected the meeting of the Committee to be held in Chicago. I believe they usually hold it in Chicago; but the meeting was held in Manitou, Colo. If it had been held at Chicago, we expected to have some bee-keepers prepare bees properly for shipment and take them to the committee rooms and show those men that bees could be put up in such a way that they would be safe to handle and ship as any other freight; but the fact of the meeting being held in Colorado prevented our doing that. I think the bee-keepers believe it is important that we secure the change. My business has been for a good many years in handling freight, and I believe it would be all right to ship bees by freight if the bee-keepers used good judgment. Of course, if he shipt when it was too hot, he might lose all his bees; but they would be taken at owner's risk, and if the bee-keeper did not use good judgment there would be no loss to the railroad company.

Dr. Miller—I think as a matter of history Mr. Lathrop is mistaken in thinking that the Wisconsin Bee-Keepers' Association made the initial effort toward securing this change. The same effort had been made before.

Mr. Rauchfuss—In regard to the effort that was made toward getting the freight-rates reduced, I want to say that the Colorado bee-keepers were not aware of it; Mr. Aikin did not inform any one of us about it, and the first I knew of it was when he came into our store on his way to Manitou. We could have taken some steps toward getting some bees properly prepared and brought before the committee, and I am sure that that would have had some influence.

Mr. Danzenbaker—I had a little experience in trying to get a car for the shipment of some bees. I had 40 colonies that I wanted to ship from North Carolina to Virginia. They said I might put into the car 20,000 pounds, but I hadn't anything like that. I could have the car, but I must pay for 20,000 pounds. Then I askt if I could put in 4,000 or 5,000 pounds of honey and a couple thousand pounds of bee-hive material; but I couldn't do that. The whole weight of it would not make over 8,000 pounds, but they would not allow me to ship a car with 8,000 pounds if I paid for 20,000 if it was made up in that way. I considered that a great injustice. They had an agreement in their association that prevented their doing it. I think that is an outrage. I could have taken the car and shipt the 40 colonies of bees, if they had allowed me to put in the honey and supplies with them.

Mr. Abbott's motion, that the General Manager be requested to prepare a form of letter to be addrest by the members to their respective congressmen, and that the bee-papers of the country be requested to publish such letter, was then submitted to a vote and carried.

[Continued next week.]

CONTRIBUTED ARTICLES

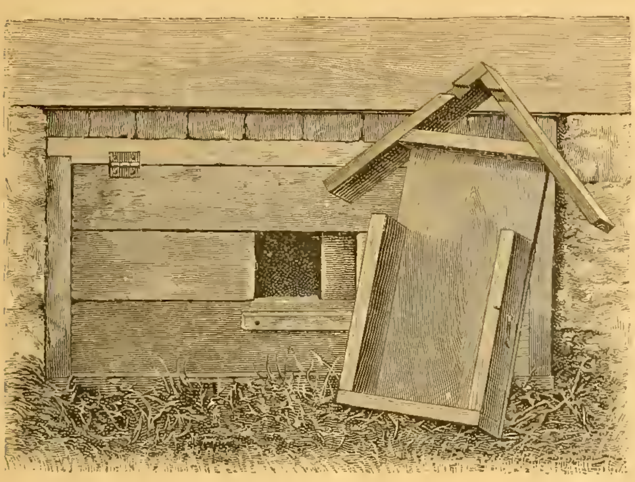
No. 7.—The Care of Bees for Wintering.

BY C. P. DADANT.

When we began putting our bees into the cellar, we were more afraid than necessary, of leaving them in too long. So we often delayed the job too much. It is of great importance that they be taken in shortly after they have had a good cleansing flight, because if they go in with empty bowels it stands to reason that they can endure much longer confinement than if they have already been compelled by the cold to consume a certain amount of food. So we have been in the habit of taking them in after a mild spell, at the time when the wind turns and the mercury falls. We often waited till the middle of December, but later decided that a cold spell in November was much safer for the removal.

A number of apiarists say that they pay no attention to the spot occupied by the bees when removed, and that when they take them out in the spring it does not matter much where they are placed, whether on the exact spot they occupied before winter, or in the place of one another. Once or twice we had considerable trouble from changing the location of hives, and have positively ascertained that many of the bees remember their former location, after three months of wintering, so we take particular pains to mark each hive's stand. To do this without trouble, we leave the cap, or cover, with the roof over it, in the exact spot occupied by the hive, and remove only the brood-chamber to the cellar. In this manner the hives occupy a much smaller space, and it is easier to give them good ventilation, which is absolutely necessary to keep the combs from molding, if the cellar is at all damp. The farther north one goes the less trouble there is on that score, and I have visited bee-keepers in Minnesota who told me that they had no trouble whatever of this description.

In those northern States, when the ground freezes it is for good, there is no chance for moisture to creep in, unless it is there already, but after our usual dry falls there is but little fear of that, and in a country where the sleighing is good from the first of December till the last of March, much less precaution need be taken than in our latitude, where we cannot be sure of good sleighing 24 hours ahead. We pile the hives in the cellar, two or three or even four tiers high, usually putting the lower tier on timbers raised a foot or so from the ground. We have always noticed that the colonies nearest the ground were the ones that suffered, if any did.

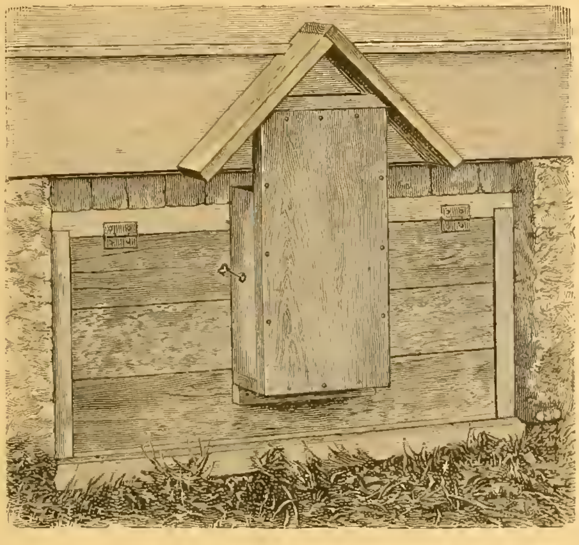


Cellar-Blind to Give Air Without Light—Langstroth Revised.

After the hives are in, darkness, quietness, a proper temperature, and a sufficient amount of ventilation are all that is necessary. For these hives, as well as for those that are out in cold days, it is a great point to have everything perfectly quiet. The man who will disturb his bees every other day, just to see whether they are still alive, will be unsuccessful if the circumstances are at all unfavorable; for it is very easy to kill the bees with too much kindness of this sort.

To give air without light to our bee-cellar we have devised a sort of blind—a picture of which is here shown, taken from "Langstroth Revised."

The time of removal of the bees in the spring is of utmost importance to consider. If they are taken out too early, they may not have occasion to fly much, and their power of endurance during a late cold seems to have been taken away from them by their prolonged stay in the cellar. They are very much like a horse that is kept in a warm barn. He is more apt to be fretful of the cold and to suffer than one that stays all winter in a cold stable. Yet our sympathies are all in the direction of the softer treatment. With the bees, there was on our part, as in the fall, a tendency to be too much afraid of a long confinement. I believe it was Dr. Miller who said the best time to remove the bees from the cellar was in March or April, at the opening of the first buds of soft maple bloom. This is a very good criterion.



Cellar-Blind in Place—From Langstroth Revised.

But above all things, a warm day must be selected to remove the bees from their confinement. If you take them out on a cold day, their anxious desire to take a flight will induce them to venture when the temperature is too low for their safety, and many of them will perish. If the day is warm and pleasant, they will take a cleansing flight within a very few minutes after they have been brought out, and are thereafter ready for their habitual duties.

I have often been askt whether it is advisable to take the bees out on a warm day during the winter for a good flight, and put them back again. I have never tried this, but from all that I ever heard, I do not believe such a course is successful. The bees, after their flight, begin to rear some brood and remain less quiet than if they had been kept in-doors all winter.

Hancock Co., Ill.

⁂

Experience with Two-8-Frame Story Colonies.

BY FRANK COVERDALE.

The middle of May I tried placing underneath ten colonies an extra hive-body, each filled with worker-combs and an average of say about five pounds of honey. These bees received this with much favor, and set to work rearing an extra amount of brood, and by the time clover began to yield all seemed to be, and were, chock-full of brood and bees; or, in other words, were filled with brood, pollen and honey. One thing I noticed, these colonies had stored a large quantity of pollen. However, I could see at once that this plan had brought forth a multitude of bees ready for the clover harvest, and now as to whether they would work or swarm—that was the question that so deeply interested me.

Supers were put on all around at the time, both on the double deckers and single deckers, and as the harvest came on swarming began, and, I must confess, to my surprise, these 16-frame colonies rather too badly. None of the 10 filled any section-cases with honey from clover; 80 single-story colonies produced my small crop (all the above in one yard); 8 of the latter filled and completed two cases of 22½ pounds each, or 45 pounds of comb honey; the next best 8 filled only one case, and so on down until many, even single bodies, yielded no surplus at all.

But to return: The 10 double-deck hives, I estimate, have for winter 25 pounds more than the 80, on an average. This certainly must be taken into consideration, besides 4½ pounds of comb honey must be added; this gives 29¼ pounds as an average, while the 80 have a fraction over 8 pounds on the average, all comb, at 12 cents—96 cents.

For the 10, 25 pounds of extracted, at 7 cents, $1.75; and 4½ pounds of comb honey, at 12 cents, 54 cents—total, $2.29.

I think it would be safe to say that if the story having the least brood had been taken off and supers put in their place, at the beginning of the main flow, far better results would have been obtained in comb honey; and I think that the swarming-fever would have run at a lower ebb.

But more about this at the next writing.

Jackson Co., Iowa.

⁂

The "Notre Dame Hive"—Further Explanations and Replies to Comments.

BY B. J. CHRYSOSTOM.

The frame the inventor of the "Notre Dame hive" uses is the full-depth Langstroth.

"But should he use a frame even not much larger than the Langstroth frame, a colony occupying 40 frames by July 1 would be incredible." So says one writer. It may appear to be so at first sight, but perhaps not so after an explanation.

The bees in question are wintered on 16 full-depth Langstroth frames, having from 50 to 70 pounds of stores. This year they are lighter than usual. The average gross weight per colony is only 83 pounds; allowing 32 pounds for hive and frames, leaves a net weight of bees and stores of 51 pounds per colony. They are wintered on the summer stands in houses, packt in chaff to the depth of three feet. Thus wintered they fly out in the spring clean and frisky. The absence of dead bees, in some hives, is remarkable.

About the first of May these hives are full of bees and brood. To prevent swarming, a full-depth super is put on; then about the first of June another super is added, and if the honey-flow is plentiful a third super will be necessary about the first of July, which completes the 40 frames. Nothing extraordinary for strong colonies wintered on 16 frames, without loss in bees!

Another correspondent, referring to the same hive, has this to say:

"That hive, on page 629, I venture to say, is one that you could not get practical bee-keepers to take as a gift."

If that nameless correspondent voices the sentiments of all practical bee-keepers, then the Notre Dame device will have to remain with the inventor, who is well contented to have it alone for his own use and benefit, and to let all practical bee-keepers have what suits them best. My appreciation of the American bee-keepers assures me that they are quite capable of thinking and judging for themselves.

In the near future I shall give them this opportunity by sending to the editor a photograph of the hive and device, with all the necessary information how to make and use it, etc.

The device consists of four pieces so small and light that it may be sent by mail. It may be placed in any box of a suitable length for the frames. When the frames are put in and spaced, turn the thumb screws and you have a tight box-hive; and, turn them back, and you have a loose-hanging frame hive. These desirable qualities combined in one and the same hive constitute what is known in this locality as the "Notre Dame Hive." If this invention does not prove to be beneficial it cannot occasion loss of bees, as the loose-hanging frame has done in thousands of cases.

"A man that will write about close-fitting frames combining the safe qualities of a box-hive for safe wintering, and all the facilities of the loose-hanging frame for easy and safe handling, can hardly be worthy of much notice." This is personal, and I accept it with thanks from the unknown correspondent as a free gift. Whether the man is worthy of much or little notice can in no way affect the utility of the invention.

The above-mentioned hive is prepared for safe wintering of bees in the following manner: Cover the frames with a cloth. Then put on a full-depth super, put in one or two little woolen blankets, and fill the super with chaff, covering it so the mice may not get in. For this purpose we use a cover made of four strips of boards and a piece of wire-cloth. This kind of cover affords ample ventilation for the moisture arising from the cluster to escape. Thus prepared, the bees will winter as safely as in a box of the same dimensions, all things being equal. St. Joseph Co., Ind.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Cellar-Wintering—Southern Queens in the North—Red Clover Honey—Good and Poor Honey-Years.

1. I winter my bees in a 14x16 feet cellar, and no fire over the cellar. We have our produce in half of the cellar, and 25 colonies of bees in the west side. The thermometer registers about 40°, and in cold spells one or two degrees lower; it doesn't vary much. What effect will such low temperature have on the bees?

2. I want to get some queens in the spring to build up colonies. If I send to Florida will those Southern bees be hardy in our northern Illinois climate, or should I buy them reared near by?

3. Can you tell the taste and color of honey stored from red clover? Last summer I saw bees working strong on red clover, for the first time in my life. I took away honey that I believe was red clover honey; it was light color, yellow or amber, not pure white, with a taste without the distinct honey-flavor, but just a plain sweet, more like sugar syrup. Was it red clover honey?

4. I was told one year ago by a lady who kept bees many years, that bees generally do poorly one year, better the next, and best the third year. She said 1898 would consequently be a very poor year. Her prophecy proved true. Have you ever observed it so? ILLINOIS.

ANSWERS.—1. They ought to do pretty well, altho it might be better if the cellar was kept at about 45°. Still, one can not go altogether by the degrees of the thermometer. There's a good deal of difference in thermometers, and there may be a difference in cellars at the same temperature. The thing is to find at what point the bees are most quiet, whether that be at 40° or more. If a cellar is too cold for them, the bees must consume more fuel (honey) to keep up the heat, and this will distend the bowels, making it harder to stand long confinement.

2. So far as reports have been made on the matter, there seems to be no difference as to hardiness between queens reared in the South and those reared in the North. Possibly there might be a difference if for many generations the North and South bees were kept separate, but queens from the North are all the time going to the South.

3. I think it is generally understood that there is hardly any difference between red and white clover honey. I have seen honey that appeared just like white clover, that the producer said he was sure came from red clover. It's a hard thing, however, for one to be sure what honey comes from, unless it comes in large quantity. It would be a good thing if those who have any knowledge in the matter would tell us what red clover is like.

4. No, I've not observed any regular order, and I'm sure it doesn't always come that way in northern Illinois. 1894 was so poor the bees didn't get enough for their own use. 1895 was a little better, the bees getting no surplus, but in the fall storing enough for winter. 1896 gave some surplus, and 1897 a flood. That makes a series of four years; but there's no telling how the next four years will be.

Cane-Mill Near Bees.

Would a cane-mill near bees be a detriment to them during the can-syrup making season? IOWA.

ANSWER.—I don't know. I'd rather not risk it if I could help myself, but perhaps some one with practical experience will answer.

Transferring—8 or 10-Frame Langstroth Hives.

1. When is the best time to transfer from box-hives to movable-frame hives? I use the Hoffman frame.

2. Which would be the better to use the old comb that is in the box-hive, or full sheets of foundation?

3. I thought of using 10-frame hives, thinking I could use them for winter hives by taking out two frames and using cushions at each side and over the brood-frames. Would that make a hive all right for winter? Or would an 8-frame hive with an outside wall be the best? I want to get some new hives and hardly know which would be the best, a 10-frame or the 8-frame. I want to use them mostly for comb honey. INDIANA.

ANSWERS.—1. The favorite time is during fruit-bloom.

2. Both. That is, use the nice, straight worker-combs, saving all worker-brood, and fill up the rest of the frames with foundation.

3. That's a very hard question to answer. It will take less care to run the 10-frame hives, and they will be safer for winter than the 8-framers if not much attention is paid to either, but the 8-framers have also advantages. So far as protection in winter is concerned, the 8-frame with an outside wall will give more than the 10-frame with cushions in place of the two outside combs. If the hives you now have are 8-frame hives, it would be a good plan to try two or three 10-frame hives before finally deciding. If you now have 10-frame hives, try two or three with eight frames.

Increase Without Swarming.

In the fall of 1897 I purchast five colonies of bees (blacks and hybrids) but lost all but one last winter with dysentery. I bought three more last spring, and increast by dividing till I have nine at present. They are in the regular 8-frame Langstroth hive, combs mostly built from full frames of foundation. Two of them have tested queens; four others have young Italian queens, reared from my tested queen, but I think they are impurely mated. The other three have hybrid queens.

1. I can't let them swarm naturally, as I am away from 6:30 a.m. till 6:30 p.m., except Sundays. I would like so to handle them that I could get a fair amount of increase, and also some surplus honey, if there is any the coming season. I am not satisfied with dividing them, for if it comes on a

dearth of pasture, as it did the past season here, I would have a lot of bees to feed for weeks, as I did the past season.

2. Would it be best to clip all of the queens as soon as they are fertilized? Or try to use drone-traps to catch the queens? But that makes quite a bill of expense for the traps.

My bees are packt in winter-cases mostly, with granulated-sugar stores. MICHIGAN.

ANSWERS.—1. I suppose what you want is some plan by which you may increase, and yet not be caught with a lot of colonies that need building up. Try the nucleus plan. Start a few nuclei in which you have young queens laying. Draw from each of your strong colonies two or three frames of brood with adhering bees, and use these as far as they will go in making full colonies of some of your nuclei. That will not seriously deplete your strong colonies, but will be enough to keep them from swarming. In giving this brood to the nuclei, fill up one, then another, and so on as long as your brood lasts. If now the season is brought up with a sharp turn, you will have no weak colonies on hand, and you need not increase any more. If, however, the season continues good, you may make a second draught on all strong colonies, building up as many into full colonies as you can, and this may be repeated as long as the season and the strength of the colonies warrant, leaving you always ready for a close of the season. Neither will this hinder a fair share of surplus.

2. Whether you use queen-traps or not, you will probably find it advisable to have all queens clipt if you are not on hand during swarming hours.

Separators—Extracting-Combs—3 or 5-Banders—Oak for Hives.

1. I use 3½-inch separators, and the bees bulge the comb out at the bottom of the sections. Is it because the separators don't rest on the tins in the super? Should they rest on the tins, or be level with the sections at the top?

2. How can I keep extracting-combs over winter?

3. For working quality, which do you consider the best, 3 or 5-banded Italians?

4. Will oak lumber make good bee-hives, such as is used for making furniture? C. H. M.

ANSWERS.—1. Yes, it is because the separators don't rest on the T tins, for I suppose you mean T tins, but come clear to the tops of the sections. That makes a space of half an inch at the bottom without any separator, and you may expect bad work. Let the separator down on the T tin, thus making a space at the bottom of only ¼ inch, and the same space at the top, and you'll have no trouble.

2. Outdoors. Cover so no rain can get in, and shut tight so no mice can get in. If any worms are present (and they are likely to be present) the freezing will kill them.

3. It's not a matter of bands, only as bands may be more or less a sign of other qualities. You may get 5-banders that don't come up to the average 3-banders, and you may get them better than the average. There are good and bad in both kinds.

4. No, oak wouldn't be used for furniture if the furniture was to stand outdoors, and it won't do for bee-hives.

White Clover Yields—A Queen Experience—Partnership Bee-Keeping.

1. How often in the course of 10 years would you expect white clover to fail to secrete nectar so as to be useless to the bee-keeper?

2. As bees are required to fertilize flowers, and as they rather avoided white clover this year in this section, can we look forward to as good a stand of clover in 1899 as this year, providing it does not winter-kill?

3. Colony No. 11 in September had a queen which deposited eggs on top of bee-bread and in empty cells, to the number of four or five. I suspected laying workers, but to make sure I lookt up the queen. She was reared last summer. To what could be assigned the cause?

4. If A bought an old apiary of 30 colonies and furnishes new hives, fixtures, etc., in flat, B to do all the labor and care for the bees, what would be a fair division of the increase, and we will say 1,500 pounds of honey? The only thing I find in bee-books says bee-keeping partnership is usually unsatisfactory. A. HOTSPUR.

ANSWERS.—1. Perhaps five times or more, judging by late years. Sometimes the failure comes from the lack of bloom, and sometimes, as the past season, there is plenty of bloom but no honey.

2. In spite of the fact that no crop of clover honey was obtained, probably the bees did enough work on the blossoms to make sure of a goodly quantity of seed. But the crop of next year hardly depends upon the seed matured this year, but rather upon the plants that have been growing this year and live over winter. In your part of the country (Northern Illinois) you will probably find there was a good stand of white clover in the fall, and unless it is killed out through the winter, there will probably be a good crop of white clover next year. But a good crop of white clover doesn't necessarily mean a good crop of white clover honey.

3. I don't know. I had a similar case last summer. I found, I think, 11 cells containing pollen with an egg laid therein. The queen was all right.

4. The books are rather wise not to give very specific instruction as to what division should be made. Each case is more or less a case by itself. A very skillful man should have a larger return than one who knows nothing about the care of bees. One way to approximate an answer is to make an estimate of the amount of time occupied by the apiarist, and allow him enough to pay him for his time, figuring on a per diem all the way from the price of common day labor up to twice that, according to the skill and ability of the apiarist.

Paralysis—Queens Lost—Giant Bees.

1. I have two colonies of bees that act very strangely. They run out of the hive, hop off the alighting-board, tremble a little, and die. What ails them?

2. If a colony of bees dies of paralysis, and I use the hive and combs, is there any danger of the next swarm taking it?

3. I introduced two Italian queens in two black colonies of bees, and they killed them. I then gave them brood and they reared five queens during the summer, and all disappeared. My hives are in a straight row, a foot space between them.

4. If Mr. Wilson introduces in the United States the giant bees of India, that build "wired" combs six feet long and four feet wide, won't such a comb with the lumber it will take to build the frame be a little heavy for a small man to handle? Or, will he also introduce a machine that will take the frames out of the hive and extract the sweetness, and replace them while the apiarist "sits in the old apple-tree shade?" CALIFORNIA.

ANSWERS.—1. Very likely paralysis.

2. Probably not.

3. They may have been killed by birds when on their wedding-flight, or they may have returned to the wrong hives. If 10 or more colonies stand in a straight row, with a space of four feet between each two hives, there may be great danger of young queens entering the wrong hives, or there may be no danger at all. If the place is level and open, with not a tree, shrub, or building near the hives, the bees have trouble locating their hives, and may easily go wrong. It will help matters very much if every alternate hive is moved close to its neighbor, thus making the hives in pairs, but occupying no more ground. If there are bushes, trees, or other objects in plenty about the hives, the bees will use these to mark the location, so as to find their own hives. Even in this case, moving the hives together in pairs will be a good thing.

4. I don't know.

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

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ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK. EDITOR.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

An Unusually Merry Christmas to each reader of the American Bee Journal is our sincerest wish.

◆

Kind Words from our subscribers seem to be coming in this year with renewals of subscriptions as never before, or at least as never since we have been at the helm of the old American Bee Journal. It is indeed very gratifying and encouraging to us to know that our efforts to publish a good bee-paper are appreciated; tho many times we can hardly feel that we deserve the complimentary things that are said of our work. But we shall continue striving to merit them, and show our appreciation by getting out a still better bee-journal, as we shall be able to do with the help of our loyal subscribers and contributors.

Our great desire just now is, that *all* our present subscribers will remain with us during 1899. We cannot make any great promises for the future, only if existing plans can be successfully carried out, the American Bee Journal for 1899 will be far ahead of any previous year. Better stay with us and let the old American Bee Journal continue to "do you good."

◆

Tin vs. Wood for Honey.—Taking for a text an editorial in this journal for Nov. 10, 1898, the editor of Gleanings discusses the matter of best package for extracted honey in bulk. Like so many other things in bee-keeping, the choice of tin or wood seems to be somewhat a matter of locality. New York men prefer wood, and have no trouble with shrinking, tainting of honey, etc. Pound for pound, they say wood is cheaper. Two cans in a case are back-breakers to lift, while a barrel can be rolled. O. O. Poppleton says it costs nearly a cent a pound more for tin, and with barrels properly paraffined there is no trouble. Editor Root says:

"The truth seems to be about this: Barrels and kegs rarely give any trouble by leaking, *provided* they are well made, well seasoned, and the hoops driven up solidly *before* the honey is put into them. But there are many ignoramuses who have an idea that the barrels should be scalded out, or, if not scalded, water swisht around inside until the staves swell tight. Well, when these chaps put their honey into these barrels, trouble is almost sure to follow; and this is why, in many markets, the cans are preferred. We always prefer to buy in square cans ourselves.

"Neither do the square cans give entire immunity from leakage. There are other ignoramuses who, in nailing on covers to the cases, drive a nail through the can. Of course, there is no leakage for the time being; but as soon as the can is turned upside down, or stood on end, then there is a 'muss.' Again, some freight handlers give the cases such severe dumping as to break the seams of the cans."

Editor Leahy, in the Progressive Bee-Keeper, has this to say on the subject:

"We buy considerable extracted honey every year. We used to buy in barrels and kegs, but with us the loss of honey by use of barrels would more than pay for cans; in fact, we were often compelled to empty contents of barrels into cans, after we received the shipment. We have no home consumers who will take a barrel of honey, nor yet a half-barrel; but we have many who buy a 5-gallon can from us every year.

"A can can be set in a warm place, and the honey be kept liquid, while a barrel or a keg cannot; 5 cents will furnish a nice 2-inch honey-gate, that you can give to a customer to draw the honey from a can with, while it would take 25 or 50 cents for a faucet with which to draw the honey from a barrel or keg. Our experience has been that panel cans will not crack while being roughly handled, and as they cost no more than cans with straight sides, we advise the use of cans, and panel cans at that.

"If you have any honey in barrels to sell, please don't let us know anything about it; but we want some good alfalfa honey, in cans."

Our own opinion has undergone no change since it was given Nov. 10. We prefer tin cans every time, and all the time. (Mr. Leahy will find alfalfa honey offered in cans, on page 812).

◆

Writing for Publication is toucht on by Editor Hill, of the American Bee-Keeper, in this very sensible paragraph:

"A point which some ambitious young writers would do well to remember, is, that correct spelling and grammar are not nearly so important as a subject. If you have something interesting to write about, tell it as best you can; it is the editor's business to see that it appears properly in print. The object in writing for publication is to say something that will be interesting or helpful to others; not merely to occupy space with an exhibition of faultless diction."

Right you are, Mr. Hill. We are with you in being willing to let some other bee-paper "merely occupy space with an exhibition of faultless diction." But, come to think of it, it isn't even "faultless diction," to say nothing of its coming far short of being "interesting or helpful to others."

◆

The Colorado Convention, held at Denver Dec. 1, we understand was a very good one. Messrs. R. C. Aikin and Frank Rauchfuss were unanimously re-elected President and Secretary, respectively. They are both tireless workers for the best interests of their Association. We expect later on to publish the report of the late convention in the Bee Journal. Heretofore it has always been a rare treat, and we presume the forthcoming report will be no exception. Those Colorado bee-keepers invariably have a most excellent annual convention.

◆

Honey Shows with Other Shows.—In the British Bee Journal a honey-show is noticed in connection with a fanciers' show, and another in connection with a chrysanthemum and fruit society's exhibition. Why not? Surely, honey is appropriate anywhere.

THE WEEKLY BUDGET

MR. M. C. BINGHAM, of Coos Co., Oreg., wrote us Dec. 9:

"The American Bee Journal has been a great source of information, and as long as I keep bees I hope to be able to send in my dollar for it each year. The last season was not a favorable one for bees here."

REV. E. T. ABBOTT, of Missouri, will again represent the United States Bee-Keepers' Union at the second annual meeting of the National Pure Food Congress, to be held in Washington, D. C., in January, 1899. Bee-keepers may expect good work done by Mr. Abbott, and an interesting report at the close of the convention.

HON. E. WHITCOMB, the new and popoular President of the United States Bee-Keepers' Union, will deliver an address before the Kansas State Board of Agriculture, at its meeting the second Wednesday in January, in Topeka. His subject is "Practical Lessous in Bee-Keeping." Bee-keepers near enough to attend, as well as all others, should be present if possible. Mr. Whitcomb is an interesting talker on bees and—we were going to say "Indians." Yes, he knows the red men pretty well, too. At least you would have thought so could you have seen him join in their war dances at the Omaha Exposition.

MR. H. E. MCGREGOR, of Outagamie Co., Wis., wrote us as follows, Dec. 13:

"In sending my subscription for 1899 I find that I have taken the Bee Journal for 10 years. To say that it has been first-class is not putting the matter too strong. I am surprised that some of your readers can read the excellent articles of Dr. Miller, Dadant, Doolittle, and others, and then neglect to send in their dollar (in many cases overdue) to the editor to keep the Bee Journal financially intact. Come, friends, shell out that dollar, and make the editor happy; and if you can get an extra subscriber, why, that will make his wife happy, also."

MR. E. B. HUFFMAN, of Winona Co., Minn., writing Dec. 13, said:

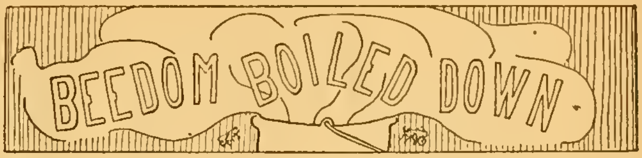
"The price of the American Bee Journal is simply nothing as compared with the information a person receives from its pages. I could not entertain the idea of doing without it, as I often get more than the value of my subscription in one article; in fact, to a beginner it is very valuable. You may take the country at large, and where you find a man that makes a success of keeping bees you will find that generally he is a reader of the Bee Journal. I could refer you to some who will not take the Bee Journal, and their bee-business is a failure. But I want it as long as I keep bees. Our bees seem in good condition so far; they went into winter quarters all right."

MR. A. W. HART, of Stephenson Co., Ill., sends the following as a final reply to the controversy between himself and Mr. Bevins, whose last contribution appeared on page 710:

"Mr. Bevins seems to think I have been giving him 'Hail Columbia.' I have felt no bitterness, have not felt hurt, and have nothing to pardon. He concedes now my question was fair, that I was honest, etc., and would take all back. Does not this admit he has been aggressive? How, then, is it fair to say I am brimful of belligerency? And that it is reasonable to suppose I will continue the war, etc., when from first to last I have been on the defensive?

"I am aware of the unprofitableness of such a controversy, and that in our American Bee Journal it is out of place, and only have replied to Mr. B. as he seemed to be pursuing me. I have done, and will leave the matter on its merits, as Mr. B. has gotten around on the original question, and would like to know as I did—Why Italian bees store the best honey, etc."

As Mr. Bevins, we believe, on two occasions wrote that he meant no disrespect to Mr. Hart, we conclude that the foregoing will be the end of the personal part of the discussion. If there is anything more to be said, let it refer directly to the original question.


BEEDOM BOILED DOWN.

Adulteration in Germany.—In Centralblatt is reported the case of two men who were fined $200 each for dealing in adulterated honey.

Apis Dorsata.—"May be I am wrong, but it seems to me Apis dorsata should be tried in its own climate, and that pretty thoroughly, before we can go to great expense in bringing them to this country."—Editor E. R. Root, in Gleanings.

Low Freights on Honey in England.—At a conversazione of British bee-keepers, Miss Leigh said a spring crate made to carry two dozen sections would travel 50 miles on the Great Western Railway for 16 cents, and was returned empty to her from her customers.—British Bee Journal.

Consumption of Honey When Breeding.—R. C. Aikin thinks bees consume no more during the entire winter and spring up to May than they do in a month while breeding heavily in May and June, the consumption in Colorado being about 15 pounds of honey each month at that time.—Progressive Bee-Keeper.

Foul Brood 100 Years Ago.—About 1790, for the cure of the pest or foul brood, it was advised to put the diseased colony in the condition of a swarm, and this is the method counseled in one of the late numbers of the American Bee Journal, which method we will publish at an opportune moment.—Le Rucher Belge.

Extracting-Frames, C. P. Dadant thinks, should be of medium depth. He objects to "little, shallow, 4¼-inch toy extracting-frames," which make too much handling for the amount of honey harvested; but objects just as much to having them the same depth as the brood-frames, believing six inches about the right depth.—Gleanings.

"**Apartment**" and "**Department**" are words that continue to get mixt up in the bee-journals. Doesn't "apartment" refer to space and "department" to kind? The linen and the woolen departments of a store may be in the same apartment, and one of these departments may occupy two apartments. When a queen goes up into a super, she goes into another apartment.—Stray Straw, in Gleanings.

Santiago de Cuba as a Bee-Country.—L. F. Hiorns reports in Gleanings that he saw no colonies in hives except four at Siboney, 8 inches square inside, 2 feet long, open at each end, with a piece of burlap, having an inch hole for an entrance, hanging over the ends. He advises against locating apiaries there. W. W. Somerford is to make a trip through Cuba with wheel and camera, and report as to bee-keeping in Cuba, especially about Havana.

Don't Overstock.—"All my personal experience points to small apiaries for greatest profit," says that delightful dreamer, Somnambulist, in Progressive Bee-Keeper; "hence, the out-apiary question, with all appertaining thereto, is of most vital importance to the would-be financially successful bee-keeper. But a few territories will profitably employ large apiaries. No mistaking the prominent middle finger pointing to this fact." But have you lost the index finger, Sommy, that you don't use that for a pointer?

Large, Single-Story vs. Small Two-Story Hives.—C. P. Dadant cannot agree that it is as well to have the same amount of room in two stories as to have it all in one story with larger frames. He says in Gleanings that he thinks it better when two stories are used, to give the additional story below rather than above the one containing the early brood-nest, but he thinks it still better to have only one story, with frames 2½ inches deeper than the Langstroth. A single story of eight Langstroth frames is too small, and two stories too large. If comb honey is the object, the bees will put 20 or more pounds of surplus below, that ought to go in sections, if two stories are given.

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Queens for Business.
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

J. P. H. BROWN, Augusta, Ga.

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HOW TO START
in the POULTRY BUSINESS and how to make it a complete success is the theme of our POULTRY GUIDE. Tells all about poultry houses, how to build, cost, &c., and how to breed, feed and market fowls. Treats also of the famous CYPHERS INCUBATOR which is delivered freight paid to every purchaser. This machine requires absolutely no artifical moisture. Send 10 cents and get the book. Circulars FREE.

THE CYPHERS INCUBATOR CO. Box 50. WAYLAND, N.Y

Please mention Bee Journal when writing.

GENERAL ITEMS

Bees Did Well—Bitter Honey.

I cannot get along very well without the "old reliable" American Bee Journal, and I think all bee-keepers should join the United States Bee-Keepers' Union; it is for our good, and all others concerned.

Bees did very well the past season, but our fall honey is so bitter that no one can eat it. It has a very sickening taste. It will be good to feed the bees to start breeding in early spring. ROBT. WILLIAMSON.

Choctaw Nation, Ind. T., Dec. 5.

Very Good Season.

The past season was a very good one in this locality. I started last spring with 45 colonies, increast 10, and took off 2,200 pounds of surplus honey. I think I could have done better, but I had other work to do, and had to neglect the bees somewhat. This was my first season's work among the bees. I can't get along without the American Bee Journal. J. L. HAIGHT.

Delaware Co., N. Y., Dec. 5.

An Octogenarian's Report.

Altho 80 years old this month, I still keep a few colonies of bees, not so much for profit as for pleasure. I have about a dozen colonies, but my sight is so defective that I cannot give them the attention they require—too nearly blind to pick out a queen—but I manage always to get some honey.

This cannot be called a honey country; we have a great abundance of white clover, but it does not afford much nectar in many seasons. I sowed some sweet clover seed, and I think it will prove a great boon to bee-keepers here. In my garden it is still in bloom.

I very much enjoy looking over the Bee Journal, and would want it if I kept no bees. Last season my bees had a perfect mania for swarming. Some colonies swarmed four times, and one prime swarm sent out four. Finally I got tired, and dumpt two or three into the same hive, and let them settle the matter for themselves. They were satisfied, and seemed to do well. Is this mode of procedure common? I will try to prevent so much swarming in the future. N. OSTRANDER, M. D.

Thurston Co., Wash., Dec. 2.

Poor Honey Season.

It was a poor honey season here this year—only about one-fourth as much honey as last year, and not much increase in swarms. I put 45 colonies into winter quarters—29 in a shed open to the south, packt in straw, with Hill's device and two supers packt with cushions, etc.; 18 colonies in the cellar, and two on the summer stands, one of which is in a chaff hive, and one in a large hollow log. Some will need feeding in the spring.

I like the American Bee Journal.

NOAH MILLER.

Johnson Co., Iowa, Dec. 6.

Bees in Fair Condition.

I commenced the season of 1898 with 16 colonies, and did not get a new swarm, but took off some 600 pounds of comb honey. I have just purchast 50 colonies more, and got them home and in winter quarters, so I have, all told, 60 colonies. They are mostly in Simplicity and Langstroth hives; some are in chaff hives. It was a very poor swarming season in this (Erie) county; still the hives are well filled for winter.

I am an old soldier, and used to keep bees before and just after the Civil War, but for the last 25 or 30 years I have not had any,

Sweet Clover
And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order.

	5lb	10lb	25lb	50lb
Sweet Clover	.60	$1.00	$2.25	$4.00
Alsike Clover	.70	1.25	3.00	5.75
White Clover	.80	1.40	3.00	5.00
Alfalfa Clover	.60	1.00	2.25	4.00
Crimson Clover	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, wanted by freight.

Your orders are solicited.

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Something entirely new; largest book out. Worth $25. to anyone; tells all about poultry; how to be a winner, how to MAKE BIG MONEY with eggs or stock for market or fancy. Send 15c for mailing and postage.
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Box Freeport, Illinois.

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Beeswax Always Wanted
for Cash or Trade at highest price. Catalog for 1899 will be ready in January.

Send me your name, whether you are a small or large consumer or dealer.

GUS DITTMER, Augusta, Wis.

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Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Cat. free. Walter S. Pouder,
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INDIANAPOLIS, INDIANA.

"WATCH POUDER'S AD"

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BEE-KEEPERS! Let me send you my 64-page Catalog for 1898
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Hives, Sections, Foundation, Etc.,

always in stock ready to ship, and the prices will be found RIGHT. We also run two apiaries for honey and sell BEES AND QUEENS. If you expect to use anything in the Apiarian line the coming year, you will do well to send for our Catalogue. We would be pleased to quote you SPECIAL PRICES on what you want, as this is our dull season, and we can afford to sell for small profits. Hives, Sections, etc., are made in Wisconsin, where lumber is low, and the best can be had.

Our Special Price on Foundation, Hives and Sections will make you Smile.

Write for it, stating the quantity you can use. DEALERS should write for our '99 discount sheet which is now ready to mail.

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Apiaries, Glen Cove, L. I. Please mention Bee Journal when writing.

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It is low priced, not cheap. Made from the best of cast gray iron with 14 oz. galvanized steel boiler to hold 20 gals. Just the thing for cooking feed for stock, pigs or poultry and heat water for scalding hogs. **Reliable Stock Food Cookers** are equally good but of much larger capacity. 25 to 100 gals. We will be glad to quote prices on inquiry. Do not buy until you get our free descriptive circulars. Better write for them at once.

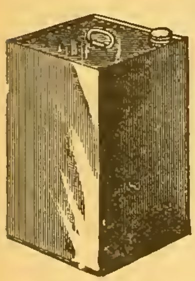
RELIABLE INCUBATOR AND BROODER CO.
Box B2, Quincy, Illinois.

$50.00 FOR A BEE-STORY.....

The PROGRESSIVE BEE-KEEPER wants a good bee-story. The story should not be less than 15,000 nor more than 20,000 words, and we will pay $50.00 in cash as first prize for such a story. There will also be second and third prizes. No one financially interested in the company will be allowed to compete, or act as judges, and we guarantee that none but competent and impartial parties will decide the contest. For further particulars, address,

THE PROGRESSIVE BEE-KEEPER,
HIGGINSVILLE, MISSOURI.

HONEY ✻ FOR ✻ SALE.



Best White Alfalfa Extracted...

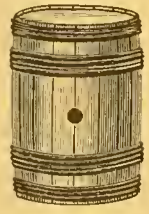
IN 60-POUND TIN CANS.

This is the famous white extracted honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can hardly get enough of the Alfalfa extracted.

Prices are as Follows:

A sample by mail, 8 cents in stamps, to pay for package and postage. By freight—One 60-pound can, 8 cents per pound; 2 cans, 7¾ cents per pound; 4 or more cans, 7½ cents per pound. Cash must accompany each order.

Best Basswood Honey in Barrels.



We have a quantity of finest basswood honey in barrels, weighing 625 pounds net, which we are ready to ship f. o. b. Chicago, at 7½ cents a pound. Sample mailed for 8 cents. If desiring to purchase, let us know, and we will write you the exact number of pounds in the barrel or barrels, and hold same till you can send the cash for it by return mail.

Our honey is ABSOLUTELY PURE BEES' HONEY, the finest of the kinds produced in this country.

☞ We would suggest that those bee-keepers who did not produce any honey for their home demand the past season, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. Address,

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

and owing to poor health I am now trying my hand once more, so I need to read up, and must say the American Bee Journal is a great help to me; you would be surprised to see how my wife is getting interested in reading it, as well as some of the children. I have read different bee-papers, and I must say, give me the American Bee Journal.

SPENCER S. BUXTON.
Erie Co., N. Y., Dec. 5.

◆

Favor Foul Brood Law.

I have taken the Bee Journal but a short time, and consider it very interesting, especially the proceedings of the great convention at Omaha.

As I was one of the proposers of a foul brood law in our State, at the Northern Illinois Bee-Keepers' Convention, held at Freeport, Sept. 16 and 17, I earnestly hope it will be pusht for all it is worth by the committee appointed at the State Convention in Springfield, as I think it of great importance to bee-keepers.

M. R. BLISS.
Winnebago Co., Ill., Dec. 3.

◆

An Arizona Report.

I am a fledgling in the bee-business, and am in need of much information. I commenced last spring with 120 colonies, and increast to 180, mostly by division. I work for extracted honey entirely, and my bees gave a surplus of 120 pounds per colony, spring count. I did not use a pound of foundation for increasing or otherwise, except what the bees made themselves. August was a failure here this year. The last of July was my last extracting for this year. Bees have 50 to 60 pounds of honey per colony for winter.

L. E. REDDEN.
Maricopa Co., Ariz., Nov. 29.

◆

Basswood Light—Clover Injured.

I find the Journal a great help, and gain a better understanding, as its weekly visits are sure to come.

I began the bee-business last spring by purchasing 12 colonies; I have put 22 into the winter cellar in apparently fine condition. I took off 243 one-pound boxes of No. 1 honey, besides a quantity of "shell" honey, or partly-filled boxes. Basswood was very light here, owing to a late frost in July, the fifth day after the basswood began to blossom, and the extreme dry weather which prevailed here injured the clover crop.

A. J. MCCOY.
St. Lawrence Co., N. Y., Dec. 5.

◆

Hopeful for Next Year.

I am a beginner in bee-culture, starting with two colonies in February of this year, and, on account of the poor season, have had neither honey nor increase; but my bees are in good condition for winter, and I expect better success next year.

W. A. SHUFF.
Philadelphia Co., Pa., Dec. 5.

◆

Fair Season for Honey.

I see by the reports from the different States that some have had a fair season while others have had an entire failure of the honey crop. In this fair State we have been blest with a fair season for honey. When the fruit bloomed in the spring the bees started off in great shape; in about a week it began raining, and was cool for about two weeks, and the honey-flow stopt somewhat, so we did not get very much early honey. When the late honey-flow commenced we had good weather, so the bees gathered a fair crop of fall honey.

I started with 14 colonies, increast to 21, and lost some four or five swarms by being in the country, building a barn during the swarming season. My average per colony, spring count, was 36 pounds of honey.

I sell all my honey at home at good prices. I see by the Bee Journal a great many send their honey to the commission merchants. I think it is a great mistake,

26c Cash Paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **26 cents a pound — CASH** — upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

Ho, for Omaha !

As we have many customers in the Northwest, and believing they will appreciate the low freight rates obtained by purchasing goods from a railroad center nearer to them than we are, getting a direct through-freight rate, thus cutting the freight in half, we have establisht a branch house at 1730 South 13th St., Omaha, Neb., where we will keep a complete line of all Apiarian Supplies, the same as we do at Higginsville, Mo. With the quality of our goods, we believe most bee-keepers in the West are already acquainted, but to those who are not, we will say that our goods are par excellent. Polish, snowy-white Sections, beautiful, straw-colored transparent Foundation, improved Smokers and Honey Extractors, and all other first-class goods, are what we sell. Kind and courteous treatment and honorable dealing our motto. On these bases, we solicit an order, feeling sure that if we sell you one bill of goods you will be our customer in the future.

☞ PROGRESSIVE BEE-KEEPER, 50c per year. "Amateur Bee-Keeper," 25c. Both for 65c. postpaid. Sample copy of the PROGRESSIVE free, and a beautiful Catalog for the asking.

Address, **Leahy Manufacturing Company,** **Higginsville, Mo.,** or **1730 South 13th St., Omaha, Neb.**

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Special Agent for the Southwest—

E. T. ABBOTT, St. Joseph, Mo.

Mr. Abbott sells our Hives and Sections at factory prices.

Buy Your Sections Now

while we offer them at a **LARGE DISCOUNT**, having added to our plant one of the most complete one-piece section machines, enabling us to turn out the most beautiful sections on the market. By sending us a list of Supplies wanted we can save you $ $ $. **R. H. SCHMIDT & CO.**, Box 187, SHEBOYGAN, WIS.

TO SELL OR LEASE FOR CASH.

An up-to-date Apiary consisting of 200 good colonies or over, with Fixtures complete. Privilege to remove to some other location if desired. Correspondence solicited. Address,

THE GILA FARM CO.
51A6t *Cliff, Grant Co., N. M.*

Page & Lyon Mfg. Co. New London, Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

lease mention the American Bee Journal. 7Atf

Please mention the Bee Journal when writing Advertisers.

for it gives the dishonest commission man a chance to adulterate and throw a great lot of spurious stuff on the market, and cut the prices. Let each one be his own salesman, and sell direct to the jobber and consumer, and when he has disposed of his honey crop he will find his purse will not be nearly so light. Let him see that his honey is strictly pure, and when his customers find that the honey they get from him is always pure, he will have control of the market where he sells his honey.

L. WAYMAN.

Labette Co., Kans., Dec. 4.

◆

Suffering From Foul Brood.

I have at present about 65 colonies of bees. They did well here the past season, but foul brood is in our midst and is likely to remain, as many do not know what it is, and others conceal the fact that their bees have it. An inspector is certainly needed in Illinois. I lost, in two years, nearly 80 colonies with foul brood, and have been a subscriber to the American Bee Journal for 12 or 14 years. My mistake was in trying to cure with drugs, as formerly recommended. The McEvoy remedy is the only remedy, but many persons who keep bees read no bee-papers and know nothing of the disease or its treatment.

The American Bee Journal seems to become more interesting as we grow older, and if I did not keep bees I would still want it.

C. A. HAINES.

St. Clair Co., Ill., Dec. 16.

◆

Beginner's Report—Hiving Swarms.

Last spring I started with 20 colonies in 8-frame dovetail hives. Most of these had young queens, reared during the previous season, from Italian queens purchast from different breeders. The colonies were not all strong, as the honey-flow the fall before failed. By taking some of the combs of honey from the stronger and giving them to the weaker, all were soon strong and ready for the flow, which came about May 10.

Before this I clipt the wings of all the queens, as I did not care to run and climb after swarms. As soon as the flow began I put on supers, with starters in the sections. At the same time I put wedges, 1x⅞ inch at the entrance, tapered to a feather-edge at the other end, under the hives. It was just fun to watch the bees come home loaded and alight nearly half way back on the cluster or bottom-board.

With this arrangement the first swarm issued May 17, followed by others until about June 15, in all 15 prime swarms. It was a pleasure to hive them. The first thing was to cage the queen, then remove the old hive just back and to one side of the old stand. Place a new hive with starters in the frames on the old stand. Put a zinc-excluder over the frames, and take the super, bees and all, from the old hive and place it on the zinc-excluder. By this time the bees will be coming back, and as they rush into the new hive, let the queen run in with them. You dare not be very slow or they will be coming back before you are ready, or they may not return for 10 or 15 minutes.

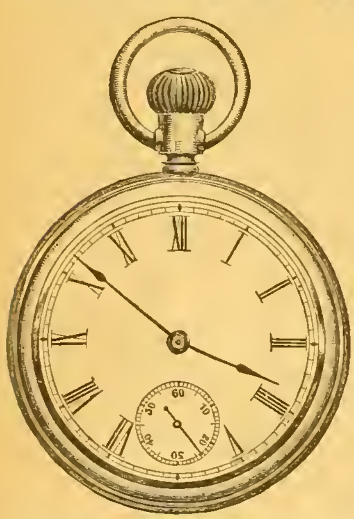
In three or four days I place the old hive on a new stand. In this way the field-bees are thrown into the new hive, which gave me what I wanted to get—comb honey.

At the beginning of July I had 250 pounds of nicely-capt white clover comb honey, and 35 colonies.

The fall flow began about Aug. 15, and during the flow, which was short, the bees gave me a surplus of 500 pounds of nicely capt buckwheat comb honey; also about 250 pounds more of partly-capt, which I extracted and let the bees clean them out for next season's use. The partly-filled sections were due to the flow stopping suddenly. I sell my honey near home for 15 and 20 cents per section.

As I was the only one in this community who got any surplus honey to speak of, I attribute my success to equalizing in the spring, using wedges, and hiving on the old

Another Big Offer! AS I have explained in previous advertisements, the publisher of a good journal can afford to make liberal offers for the sake of getting his journal into new hands. I have in the past made several such offers; but here is one that I consider especially liberal. If you are not a subscriber to the *Bee-Keepers' Review*, send me *$1.80*, and I will have your subscription to the American Bee Journal renewed for one year, send you *12* back numbers of the Review, and then the Review for all of *1899!* Remember two things: you must be a *new* subscriber to the Review, and the order must be sent to *W. Z. HUTCHINSON, Flint, Michigan.*



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You Do Not Have to Invest a Cent......Everyone Will Buy.
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ABSOLUTELY FREE
For Selling 20 Sets of Aluminum Thimbles and Tape Measures (60 inch) at 10 cents per set.
Two Very Useful Articles, and of Good Quality, for Only Ten Cents.

This is a **reliable, straight** business. Every customer gets full value for their money. We do not ask you for a cent, **WE TRUST YOU.** Send us your name and address and we will mail the 20 sets to you, post-paid. When you have sold them, send us the Money and select your Premium. Full instructions and **Fine Premium List** with each Outfit.

OUR SPECIAL CASH OFFER If you prefer to sell for CASH, we will allow you 50% Commission. You make ONE DOLLAR on each Outfit. This is a Great Business Opportunity.

TAKE ADVANTAGE OF IT....WRITE TO-DAY.

Youths' Premium Company, 142 to 146 Monroe St., Dept. "B"
CHICAGO, ILL.

☞ The publishers of the American Bee Journal do not hesitate to recommend the above company, and would suggest that the boys and girls in the families of our readers write at once.

The Bee-Keeper's Guide

This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published today. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."

Given For 2 New Subscribers.

The following offer is made to PRESENT subscribers only, and no premium is also given to the two new subscribers—simply the Bee Journal for one year:

Send us **Two New Subscribers** to the Bee Journal (with $2.00), and we will mail YOU a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both together for only $1.75. But surely anybody can get only 2 new subscribers to the Bee Journal for a year, and thus get the book as a premium. Let everybody try for it. Will you have one?

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

stands. It may encourage the farmers to use the movable-frame hive. I persuaded a few last summer to get the dovetail hive, but expect to do better next year.

I used mostly the $4\frac{1}{4}$x$4\frac{1}{4}$x$1\frac{7}{8}$ sections with separators: only a few of the 5x$3\frac{5}{8}$x$1\frac{1}{2}$ with the fence. The latter gave excellent satisfaction. I intend to change to the tall section as fast as I use up the old ones during the coming season. The cost for the change will be small, as the tall section brings more in our market than the square.

At the close of the fall flow I removed the wedges and supers. After taking the sections out of the supers, I placed the supers on again so as to be ready for putting on winter packing. During the first week of October I put a Hill's device on the frames, over this a quilt, and on this a cushion of wheat chaff tuckt down very nicely.

I can hardly wait for the weekly visits of the American Bee Journal. Some of the numbers have been worth to me the whole subscription for a year. I am very much interested in the report of the United States Bee-Keepers' Union, of which I am a member. Those papers and discussions on marketing honey are excellent. If more of the bee-keepers would work up a home trade, it would be better for the bee-keepers in general, and for themselves in particular. The experience one gains in that line of work pays well, besides the surplus in his purse.

Before I was a regular reader of bee papers, I had even very little honey to eat. Now, since I am the recipient of the three oldest bee-papers publisht in the United States, I have all the honey I care to eat, besides a little to sell. I don't see how any bee-keeper can do without a bee-paper.

Long live the American Bee Journal to promote the interests of bee-keepers.

JOHN W. ALBERTSON.

Luzerne Co., Pa., Dec. 3.

Against the Credit System.

I don't know how I could get along without the American Bee Journal now; and I don't see how any man, if he represents himself as a man, can take the American Bee Journal any length of time without paying for it. The comments on "What Credit Costs," page 776, come as near my sentiments as I could express it. "Pay as you go, or else don't go," is a very good motto.

My opportunity for education when a boy was very limited, so my object has been to learn all I can in passing through this life. During the time between '61 and '65, I distinctly remember the smell of burnt powder. The fall and winter of '65-'66 I bull-whackt on the plains between Omaha and Denver, workt on the railroad, broke prairie with an ox-team in Missouri, ran an engine in a saw mill, and for over 10 years ran a retail grocery, and now am settled down to farm life. During all that time I have noticed those that paid as they went were—or seemed to be—the most happy. "A contented mind is a continual feast."

Of all the different kinds of employment that I have followed, bee-keeping has been the most interesting. At one time my friends reported me crazy on the subject; but four years have past since then, and I have not been to the asylum. JAS. COE.

Van Buren Co., Iowa.

Bees Building Comb on Limbs.

In regard to bees building and rearing brood on limbs of trees, I may say that last summer I transferred a colony which had built their combs on the outer limbs of an apple-tree; they had eggs and brood in all stages to hatching bees, also honey. The combs were about 12 inches long; in fact it was a colony of bees in normal condition, except they had no protection from wind and rain, of which we had a great deal at that time. Bees here in Kansas often go into houses, graneries, chicken-houses, or almost any place where they can find shelter. But I have seen only this one instance where bees workt without shelter. I send you sample of limbs on which the bees were living.

I should be glad to see the rule made and practiced, that everybody must pay in advance or get no paper. D. G. PARKER.

Brown Co., Kans., Dec. 13.

[Thank you, Mr. Parker, for sending the sample of comb built on a limb.—EDITOR.]

Sand Around Hives, Etc.

Last year I wrote about putting sand around the hive to keep a clipt queen within bounds, so I could put my finger on her. It works like a charm, as I have had another year to test it.

I winter my bees mostly in square boxes with flat covers and shingled. I raise up the rear to give pitch to the roof, and the water runs off and the dead bees fall out. I pack with sawdust on the sides and on top, by putting on an empty super without cover. I use heavy cotton next to the bees, and they are there every spring. I let the snow cover them up completely, and all is well. C. CRANK.

Oscoda Co., Mich., Dec. 12.

Convention Notices.

California.—The California State Bee-Keepers' Association will hold its annual convention at the Chamber of Commerce, in Los Angeles, Jan. 11 and 12, 1898.

Sespe, Calif. J. F. McINTYRE, SEC.

Michigan.—The Michigan State Bee-Keepers' Association will hold their next annual meeting in Reed City, at the Hotel King, Dec. 30 and 31.

Flint, Mich. W. Z. HUTCHINSON, Sec.

N. E. Ohio, W. N. Y., N. W. Pa.—The 18th annual convention of the N. E. Ohio, Western New York, and N. W. Pennsylvania Bee-Keepers' Association will be held in the City Hall, Cor. 13th and Buffalo Sts., Franklin, Pa., Jan. 11 and 12, 1899. The following is the larger part of the program:

President's Annual Address—Geo. Spitler, of Pennsylvania.

"Spring Management of Bees"—L. K. Edgett, of Pennsylvania.

"Summer Management of Bees"—R. D. Reynolds, of Pennsylvania.

"How can the Conditions of the Local Market be Improved?"—B. W. Peck, of Ohio.

"The best means of Increasing the Local Honey-Resources"—H. S. Sutton, of Pennsylvania.

"Profitable Use of Comb Foundation"—J. T. Nichols, of Pennsylvania.

"Making our Association More Useful"—Geo. Spitler, of Pennsylvania.

"Preparing Bees for Winter"—N. T. Phelps, of Ohio.

"Experiences of the Past"—D.A.Dewey, of Pennsylvania.

NOTICE—It is hoped that all will make an effort to be at this convention, and take an active part in the discussions. Special rates of $1.00 per day for those attending the convention have been secured at the United States Hotel, on Liberty Street.

GEO. SPITLER, Pres., Mosiertown, Pa.
ED JOLLEY, Sec., Franklin, Pa.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Dec. 8.—Our market is less active. There are now more offerings of comb honey than is absorbed, hence some accumulation of consignments without any special change in prices; yet receivers are granting concessions to move sales. Fancy white, 13c; off grades, 10@12c; amber, 9@10c; dark, 8@9c. Extracted, white, 6@7c; amber and dark, 5@6c. Beeswax, 27. R. A. BURNETT & CO.

Detroit, Dec. 8.—No change in supply of honey as to quality, but prices are somewhat lower than last quotations, viz.: Fancy white, 13c; No. 1, 12@12½c; fancy dark and amber 9@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

Columbus, O., Dec. 15.—Honey arriving freely. There is quite an accumulation, and concessions in prices are necessary to move stock. Following prices are nominal: Fancy white, 12½c; No. 1, 11½c; No. 2, 10c; amber, 9c; dark, 8c.

COLUMBUS COM. AND STORAGE CO.

St. Louis, Sept. 9.—Fancy white comb, 12 to 12½c.; A No. 1 white, 10 to 11c; No. 1 white, 9 to 10c.; dark and partially-filled from 5 to 8c, as to quality. Extracted in cases, No. 1 white, 6 to 6½c; No. 2, 5½c; amber, 5c; in barrels, No. 1 white, 5½c; amber, 4½ to 5c; dark, 4 to 4½c. Choice Beeswax, prime, 24c; choice, 24½c. At present there is a good demand for honey. WESTCOTT COM. CO.

Kansas City, Sept. 9.—Fancy white comb, 12@13c; No. 1, 11@12c; amber, 10@11c. Extracted, white, 5½@6c; amber, 5@5½c; dark, 4½@5c. Beeswax, 22@25c.

The receipts of comb honey are larger.

C. C. CLEMONS & CO.

Milwaukee, Oct. 18.—Fancy 1 pounds, 12½ to 13c; A No. 1, 12 to 12½c; No. 1, 11 to 12c; No. 2, 10 to 10½; mixt, amber and dark, 8 to 9c. Extracted, white, in barrels, kegs and pails, 6½ to 7c; dark, 5 to 5½c. Beeswax, 26 to 27c.

This market is in good condition for the best grades of honey, either comb or extracted. The receipts of the new crop are very fair, and some of very nice quality. The demand has been and continues to be very good, and values are firm on fancy grades and straight, uniform packing. A. V. BISHOP & CO.

New York, Oct. 22.—Receipts of comb honey are large, and there is quite a stock now on the market. While white is in good demand, buckwheat and mixt seem to be somewhat neglected, and quotation prices have to be shaded in order to sell in quantity lots: We quote:

Fancy white, 13 to 14c; No. 1 white, 11 to 12c; amber, 10c; mixt and buckwheat, 8 to 9c. Stocks of extracted are light of all kinds. Demand is good at following prices: White, 6 to 6½c; amber, 5½c; dark, 5c. Southern, in half barrels and barrels at from 55c to 60c a gallon. Beeswax dull at 26c.

HILDRETH BROS. & SEGELKEN,

Buffalo, Dec. 16.—Our market has become somewhat quiet since the holiday trade set in, and we consider 12 and 13c an extreme quotation for best one-pound combs now: with other grades ranging from 7 to 10 cents, according to inspection. Very little demand for extracted at from 4 to 6c. We advise the marketing of honey as readily as it can be judiciously sold. BATTERSON & CO.

San Francisco, Nov. 22.—White comb, 9½ to 10½c; amber, 7½ to 9c. Extracted, white, 7 to 7¼c.; light amber, 6¼ to 6½c. Beeswax, 24@27c

Stocks in this center are light and must so continue through the balance of the season. Choice extracted is especially in limited supply and is being held at comparatively fancy figures. Comb is meeting with very fair trade, considering that it has to depend mainly on local custom for an outlet. Values for all descriptions tend in favor of selling interest.

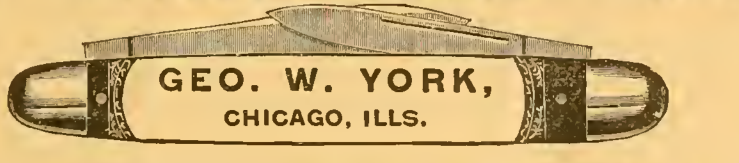
Boston, Nov. 28.—Liberal receipts with but a light demand during the holidays. As a result stocks have accumulated somewhat, and prices show a lowering tendency, still we hope for a better demand with prices at present as follows:

Fancy white, 14c; A No.1 white, 12½ to 13c; No. 1, 11 to 12c; light amber, 10c, with no call for dark. Extracted, fair demand, light supply: White, 7 to 7½c; light amber, 6½ to 7c; Southern, 5 to 6c. BLAKE, SCOTT & LEE.

Cleveland, Nov. 29.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & CO.

THE "NOVELTY" POCKET-KNIFE!



Your Name on the Knife.—When ordering, be sure to say just what Name and Address you wish put on the Knife.

The NOVELTY KNIFE is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed an AMERICAN BEE JOURNAL reminder, and on the other side, name and residence of the Subscriber.

The material entering into this celebrated knife is of the very best quality; the blades are handforged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring steel, and the finish of handle as described above. It will last a lifetime, with proper usage.

Why purchase the Novelty Knife? In case a good knife is lost, the chances are, the owner will never recover it; but if the Novelty is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelties, your pocket KNIFE will serve as as an identifier; and in case of death, your relatives will at once be apprised of the accident.

How appropriate this knife is for a Christmas, New Year or birthday present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, a lady to a gentleman, or vice versa, a son to a mother, a husband to a wife, a brother to a sister or a gentleman to a lady—the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid, for $1. , or give it as a Premium to the one sending us **three new Subscribers** to the BEE JOURNAL (with $3.00), and we will also send to each new name a copy of the Premium Edition of the book "Bees and Honey," , We club the Novelty Knife with the BEE JOURNAL for one year, both for $1.90.

Any Name and Address Put on the Knife.

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38th Year. CHICAGO, ILL., DECEMBER 29, 1898. No. 52.

CONVENTION PROCEEDINGS

UNITED STATES BEE-KEEPERS' UNION.

Report of the 29th Annual Convention Held at Omaha, Nebr., Sept. 13-15, 1898.

DR. A. B. MASON, SEC.

SECOND DAY—Evening Session.

[Continued from page 804.]

SUGGESTED REVISION OF THE CONSTITUTION.

Dr. Mason—When our present constitution was formulated the aim was to make it as much in accord with the constitution of the National Bee-Keepers' Union as possible. It seems, however, that there are a few matters in which it ought to be altered. Some have been talking the matter over, and have come to the conclusion that perhaps two or three amendments should be made. First, Article I, changing the name "Union" to "Association," so that the name shall read, "United States Bee-Keepers' Association." Also Article V, Sec. 1, adding to that section: "Their term of office shall begin on Jan. 1 following their election, and continue for one year." That is in regard to the President, Vice-President, and Secretary. Then, again, Article VI, Sec. 4, commencing at the end of the first sentence, where it says the General Manager shall be the treasurer of the Union, have it read: "He shall send notice to each member at least 30 days before the expiration of such membership of the time such membership will expire," so that each member will know when the time has come for paying his dues. Quite a number of members have remitted without knowing when their membership expired. We cannot act upon these amendments now. We can discuss them, but notice of the amendments is required to be given now. I found, in corresponding and talking with our member of Congress about the Pure Food Bill—he said he would do all he could. He caught the name "Union," and he wanted to know if we were of the sort of unions that are conducing or aiding strikes, and such things. I explained to him that we were not, and he said that he would have the name changed, as we would have more influence at Washington. We have labor unions of every class, and I have no objection to them in their place; but they don't carry with them the weight that they used to before they made so much trouble.

Dr. Miller—I move that the Union at this meeting express its approval of the proposed amendment, changing the name of the Union to "The United States Bee-Keepers' Association."

The motion was seconded and carried.

Article V, Sec. 1, as proposed to be amended, relating to the terms of office of President, Vice-President, and Secretary was then read again.

Dr. Miller—I move that we recommend that change.

The motion was seconded and carried.

Article VI, Sec. 4, relating to notice, to be given to members of the expiration of their membership, was then read as proposed to be amended.

Mr. Secor—Do you realize what work that is going to make? Members are coming in all the time, and consequently they are constantly expiring. I do not know that I could be at home every day in the year to look after the sending out of such notices.

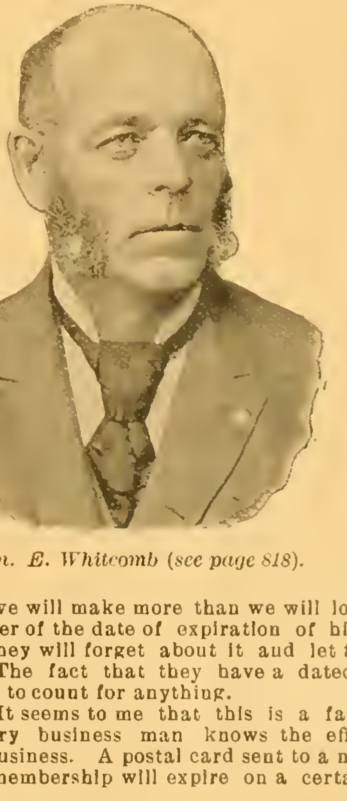
Mrs. Acklin—I think there should be a certain day in the year when all memberships will expire.

Pres. York—We decided that point at Buffalo, that it would be better to have the memberships expire a year from the time they are received.

Mr. Whitcomb—Has it been customary to issue receipts for membership fees?

Mr. Secor—Yes, sir; and on that receipt I state when the membership will expire. The receipts show the date of the expiration of the membership.

Dr. Miller—It does not follow that the members will observe that date. In nine cases out of ten the member will not keep his receipt. This change will no doubt involve a good deal of extra work, and there should be some provision made for that, even if the General Manager has to hire some one to attend to that special part and pay for it. I believe that if these notices are sent out, as proposed, a good many will continue their memberships who would otherwise suffer them to lapse. I believe we will make more than we will lose by notifying every member of the date of expiration of his membership; otherwise they will forget about it and let their memberships lapse. The fact that they have a dated receipt I think is not going to count for anything.



Hon. E. Whitcomb (see page 818).

Mr. Abbott—It seems to me that this is a fair business proposition. Every business man knows the efficacy of a drummer in his business. A postal card sent to a man notifying him that his membership will expire on a certain date is simply a drummer, and shows that the Union is anxious to have him continue. If his membership is worth anything, it ought to be worth enough to pay for this postal-card drummer. You know how it is with newspaper people; when a subscription expires, the newspaper sends out notice of that fact, and every inducement is thrown out to get the subscriber to renew his subscription for the coming year. It seems to me that as a simple business proposition, we can afford to send out a little drummer of that kind, and I think the General Manager and the Board of Directors should make provision for that sort of thing. I believe that the General Manager can send out a postal that will make an excellent drummer.

Mr. Secor—The difficulty is that under our system of bookkeeping, I keep the names of the members in alphabetical order, and not in the order of the receipt of their membership.

Dr. Mason—This provides that the notices are to be sent out at *least* 30 days in advance of expiration of memberships. That might mean 40 days or more, so that the General Manager need not send out each notice exactly 30 days before the expiration, but he can send out a batch of them at a time. If that is going to be too much work, I will volunteer to help him.

Mr. Secor—My impression is that a mistake was made in changing the constitution as it was before. Then when the General Manager sent out his report he could send out the whole thing together.

Dr. Mason—At Buffalo I got at least $25 in membership fees that I would not have gotten if the memberships had expired at the end of December. A person who paid Jan. 1 would be entitled to protection for one whole year; if he paid Dec. 1 he would get protection for only 30 days. That is not just. This matter was all canvast at Buffalo last year, by a committee who talkt the matter over and decided that it was best to put it in this way, and the proposed amendment was almost unanimously adopted by the members of the Union when they voted on it in the December following.

Mrs. Acklin—Why not do as some of the newspapers do, and let them have an extra month?

Dr. Mason—That would not be just to the others, either.

Mr. Danzenbaker—I believe the members of this Union are liberal men. I think you have made a good change here, in providing that the terms of the officers shall run for the calendar year, beginning with the first of January, and I think it would be a good thing to have the membership the same way. I paid a dollar at Buffalo last year, and until yesterday I forgot that for several days I was not a member. I do not want it to be that way. I would like to have my membership expire on the first of January, and I would vote for that change.

Dr. Mason—If those postal cards were prepared beforehand and printed, and on the first of each month they were sent out to each member who would be delinquent in the next 45 days, that would not be much trouble.

E. R. Root—I would suggest that for this work a clerk be employed to send out the notices. I am sure that the Board of Directors would be willing to pay the expense. Then we would be sure that every member would be given notice from 30 to 45 days in advance of the date of the expiration of his membership, and every one could renew his membership if he wanted to.

Pres. York—I wonder if it would not have been a good plan if we had provided last year that the memberships should expire every three months. If I paid for membership to-day, that membership could begin on the first of next month—October. I believe that would have been a good thing, if we had thought of it. Then we would have memberships expiring on the first day of January, March, July, and October.

Dr. Mason—Even then the man who didn't pay until the second or third day of October would have no protection until the first of the following January.

Mr. Danzenbaker—You speak of the matter of protection. I didn't count that at all; I never expect to need any. I am opposed to adulteration, and I am willing to contribute my fee, and more, too, to help protect others in that regard. Adulteration is only practiced with extracted honey, but I am willing to use as much effort as the rest do in helping to fight the adulteration of extracted honey.

Dr. Mason—I move that we make this suggestion. The Board of Directors can pay the General Manager not to exceed 20 percent of the receipts for his services. If that is not going to be enough for his services, we can change it so as to give him a larger salary.

The motion of Dr. Mason was seconded and carried.

RESOLUTIONS ADOPTED.

Mr. Secor here offered the following resolutions:

Resolved, That the hearty thanks of this society be and are hereby extended to the local members of the Nebraska Bee-Keepers' Society, Hon. E. Whitcomb and L. D. Stilson, for the time, labor, and expense by which they have contributed to the comfort and pleasure of this convention.

Resolved, That we appreciate the courtesy of the Commercial Club of the city of Omaha in providing our convention with these pleasant rooms.

The resolutions were approved by a rising vote.

Dr. Miller—I wish to speak of a matter which has imprest me and pleased me very much, and that is the perfect harmony that has prevailed in our sessions. Everything has gone harmoniously and smoothly, and that fact cannot but be gratefully acknowledged by every member. And another thing: I don't believe that many of you recognize how much hard work our General Manager has to do. I think we ought continually to bear that in mind, and let him feel that we are grateful to him and anxious to give him our best support.

Mr. G. M. Whitford, of Nebraska, then read the following paper, entitled,

The Relations Existing Between the Apiary and the Successful Production of Fruit.

The successful production of any crop depends upon certain conditions, some of which are easily controlled. To attain as nearly as possible to perfection in producing crops, we must not only know what these conditions are, but must learn how we can control them. Fruit-growers realize that a very important condition is the perfect fertilization of the blossoms of all kinds of fruit.

Nature has wisely provided for the pollenization of blossoms of the vegetable kingdom, in the creation of bees. Of the different agencies depended upon to do this important work the bee is the most thorough. We may plant our fruit-trees in such a way that those prolific in the production of pollen will be intermingled with other trees that are to be fertilized; or we may depend upon the winds to carry the life-giving dust from one plant or tree to another: but there are times when these will fail, while the bee would perform the work perfectly.

It is true that at times the bee is unable to fertilize the blossoms of some kinds of fruit perfectly, owing to unfavorable weather at the time the blossoms appear, and the pollen is ripe. The spring just past was such. We have an apple-orchard of about 350 bearing trees, that bloomed abundantly; just as the blossoms were opening, cold, wet weather set in and continued during the entire time the trees were in bloom, consequently the apple crop will not exceed 25 bushels for the entire orchard. The same trees in 1896 yielded about 1,500 bushels. Plum and cherry trees blossomed before the wet weather began, and bore a full crop of fruit.

Our first cherry trees were set out in the spring of 1875; at that time there were no bees within four miles of the trees, which bore a very small quantity of fruit, some years failing entirely, until 1886, when we bought a colony of bees. Now we get a crop of cherries each year; at present the cherry is considered an annual cropper, and it is expected that the trees will commence bearing as soon as they are large enough. The same varieties are grown that were put out 10 or 12 years ago. The only way we can account for the increast yield of fruit is the fact that there are more bees in this locality.

The same facts hold true with all kinds of fruit—unless the blossom is fertilized no fruit will be developt.

Orchards that are visited by bees produce better and more uniform specimens of fruit, than those not visited, from the fact that the bee carries pollen from one tree to another, thus cross-fertilizing the blossoms. G. M. WHITFORD.

A discussion of the paper was dispenst with, in view of the lateness of the hour.

Hon. E. Whitcomb, of Nebraska, then read a paper, on

The Apiary on the Farm and in the Orchard.

The apiary is fast being recognized as one of the sources of profit on the farm, especially with the farmer who desires to carry on a system of diversified farming. The farmer, of all people, is perhaps the least dependent upon his fellow men, and on every fair-sized farm there annually goes to waste several hundred pounds of nectar, unless he has the means of gathering and storing for the use of himself and family. It is not necessary that the farmer bee-keeper become a competitor in the markets with the expert bee-keeper, and in most instances this would not be desirable or profitable, but I have earnestly advocated that the farmer should produce at least sufficient to supply his own table, if not more.

Honey is being recognized as so healthful a diet, especially for children, that not a family can be found where honey enters into the everyday diet who have any cause to call the family physician. A single pound of well-ripened honey contains more nutriment than two pounds of pork, and more medicine than any druggist would put up for 50 cents.

As fertilizer on the farm the bee is of value, which will appear later on in this paper. By fertilizer we do not wish to be understood enriching the soil, but the clovers and fruits that form a great portion of the industries of the farm.

In the orchard, in the garden, and more especially among small fruits, the honey-bee is fast becoming recognized as a very important factor. Out on the treeless prairies where wild bees are almost entirely unknown, this is of more importance to the orchardist and horticulturist than in the localities farther east. Here the gentle zephyrs which often waft themselves into small hurricanes, cannot be depended upon to fertilize or pollenize the flowers of the fruit-tree, and the honey-bee must be relied upon to do the work.

Early this year, on talking with a gentleman from Colorado, who was largely engaged in growing melons, he remarkt that when he first engaged in the business the crop was very unsatisfactory—melons ill-shaped, and inferior—when a friend suggested that the honey-bee would remedy the difficulty, and a few colonies were introduced in the melon-fields, and with the result of more than four times the former crop from year to year, and at this time Senator Swink, of Colorado, would not think of growing melons without bees beside them.

In my own experience, the spring of 1893 was wet and cold. The orchard showed a profusion of bloom. In the cherry-orchard there were two bright days which enabled the bees to work upon the cherry-bloom, and as a result I harvested 300 bushels of cherries; when my neighbors who had trees in equally good condition as mine, bought their fruit from my orchard. The apple-blossoms fell without giving the bee an opportunity for work upon them, and the result was no apples. A few deformed ones remained on the trees until partially grown and then fell off, and were counted among the crop of windfalls.

As farmers and orchardists I am confident that we do not attach sufficient importance to this one item of adding the honey-bee to these industries, and often score signal failures because of this neglect. It is not expected that every farmer or every orchardist should become an expert bee-keeper, or that he could come in competition with those who have made that a business and a lifetime study, but they should be combined sufficiently to make a success of the former, inasmuch as it has already been clearly demonstrated that the blossom must be pollenized in order to produce fruit, and that bees cannot be kept profitably without the blossoms from which to gather nectar.

A few years ago, while attending the State Horticultural Society meeting at Wymore, Nebr., we were shown a peach growing on an apricot tree. This showed too clearly the work of some busy bee flitting from the peach to the apricot, carrying the pollen from one to the other. Perhaps Nature may have stept in finally to aid this work in a measure, but the lesson of the importance of the bee to the farm and orchard was left as clearly as if the historian had witnest the whole transaction. E. WHITCOMB.

A. I. Root—There is a very important fact, that melon-growers have been compelled to get bees—some of the larger growers getting them by the hundreds of colonies.

Mr. Whitcomb—In these States out here we have few of what are called wild bees, and if we are to make a success of growing small fruits we must introduce bees along with the fruits and other agricultural and horticultural interests. My apiary is in close proximity to the orchard, and the bees work on the bloom of the cherry-trees, and I have good crops of cherries, while my neighbors, who have just as good trees and as good bloom, get comparatively no cherries, because they have no bees. In our Institute work over the State, we find it to be the universal verdict that bees must be introduced along with the small fruits, or along with the orchards, in order to get any fruit. The horticulturist, instead of fighting the apiculturist, should really regard him as a friend.

A. I. Root—The gentleman who spoke to me about using bees in connection with melon-growing says they have some 500 or 600 acres of melons, and 400 colonies of bees, and he told me this morning that they were going to put in 200 more colonies.

Mr. Danzenbaker—We have two men who are engaged in raising cucumbers under glass in winter, and they put two colonies of bees into the house to fertilize the blossoms. In Florida I visited a man who did the same thing there. They tried fertilizing by hand, but they say that plan did not succeed, compared with fertilizing with bees.

For the want of time the papers by Dr. J. P. H. Brown, of Georgia, on "Needs of Bee-Culture in the South," and by Mr. Wm. McEvoy, of Ontario, Canada, on "Foul Brood," were past without reading, to be included in the publisht proceedings. They will appear at the end of the report.

[Continued next week.]

CONTRIBUTED ARTICLES

Journalistic Courtesy—Bumble-Bees and Andrena.

BY PROF. A. J. COOK.

As that day of all the year the best—Christmas—is right upon us, it is a good time to speak of peace or aught that makes for it.

No doubt most of the readers of the dear old American Bee Journal have heard the story of "Jim" and "Bill." They met after enlistment in the service to fight for their country. Bill says:

"Jim, why did you enlist?"

"You know," replied Jim, "that I was a single man, and always did like war, and so enlisted."

"And Bill, why did you enlist?"

Bill answered: "I am a married man, and always liked peace, and so I enlisted."

I am sure bee-keepers are like Bill. They like peace, and so are rejoiced at this very eve of the century to note the pleasant relations among the several bee-papers, and the kindly feeling in the whole fraternity. As of old it is a goodly thing for brethren to dwell together in unity, and I am sure that the whole fraternity are to be congratulated, in that our editors are agreed that peace, not war—concord, not discord—are what go to make up the most reputable journal.

It is 30 years since I first became interested in reading the bee-papers. As all will remember, who were then patrons of our art and readers of its literature, bitter quarrels, harsh invectives, and unseemly aspersions, too often showed their uncanny visage in the bee-papers of that day. The great wrongs of Mr. Langstroth embittered bee-keepers against each other. Those who knew of the injustice done the grand old man found it hard to keep denunciation back; while those who had done the wrong had their friends, who were as free to defend and to return harsh criticism.

For many years, now, the spirit of our bee-papers has been entirely different from that of the olden time. Mr. A. I. Root came into the ranks about the time I entered. He soon brought the Christian spirit with him, and workt with zeal, not only for the craft, but to bring amicable relations among all bee-keepers.

Not long after, such men as Drs. Mason and Miller were in the thick of the fraternity, and it is hard for quarrels or bitterness to exist wherever their genial influence is felt. Mr. Hutchinson was another who was too fair in his judgments and feelings to brook anything tainted with dissensions. The present editor of the "Old Reliable" is not a whit behind the chief in his love for peace, and works to keep it ever to the front. It is certainly a blessed change.

If, as has been suggested of late, some one does throw an apple of discord into our literature, or come with the proverbial chip on the shoulder, no one picks up the apple or knocks off the chip, and so no conflict occurs. The discouragements of poor honey seasons and no returns for hard labor may tend to make even the amiable man combative, but we are rejoiced that even that so seldom succeeds in bringing discord to the front.

I believe it is the grand province of our Christian civilization to make every pursuit in the highest degree successful, and, better than this, make all of each pursuit, and all pursuits, to work in fullest harmony each with the other, that all may joy most only when all are receiving most.

BUMBLE-BEES—ANDRENA.

The article from Prof. L. Bruner, contributed by him for the Omaha convention, was certainly very able and full of interest. It is good to have specialists speak on such occasions. There were two or three positions taken by him that I am led to question: He says that bumble-bees gather honey mostly for the brood. I am inclined to the opinion that with bumble-bees, as with the honey-bee, the honey is as important for the mature as for the immature bees. Bumble-bees are so like the honey-bee in their habits, work, and life history, that I believe what is true of the one is largely so of the other. I think the main part of the pollen is for the brood, but that the honey is quite as much for the mature bees.

Again, I feel sure that the species of Andrena do at times take from the honey of the hive. There are many records of such pilfering on the part of the small black bees. I have often had such bees sent me.

I was glad Prof. Bruner spoke so well of the value of bees as pollinators, and said of a truth that honey-dew is exclusively the product of insects. There is little doubt but such is the truth. Los Angeles Co., Calif., Dec. 12.

Mosquitoes and Other Pests in Cuba and the South.

BY F. DANZENBAKER.

I went to the Omaha convention hoping to meet Mr. O. O. Poppleton, but I failed to see him. I was very greatly pleased with the valuable information given in his interesting paper on honey-production in Cuba, as I wanted to learn still more of the drawbacks, if any, that might be there.

Mr. Lathrop wisht to know if there was foul brood there, but no one present could answer the question. Mr. Poppleton now says there was none in Cuba.

I am under further obligation to Mr. Poppleton for his calling attention to what I askt about—other pests that might be there to make miserable the life of the bee-keeper. I did not say how many mosquitoes were in Cuba—I said I had askt returned soldiers, and others from there, about mosquitoes, gnats, fleas, and sandflies, but no one that I had met seemed able to answer, and I wisht to know if there were none there; perhaps those I met had not been outside of the cities enough to know.

Having spent the greater part of the past 22 years in the South, I am aware of the insects and creeping pests that infest that otherwise favored region. Take them away, and for me it would be an earthly Eden; and I have desired for years to learn if there is any place in an all-time summer-land free of insect pests. If so, I would like to go there to live, as I have no use for frost and snow. I have been on the east coast of Florida several seasons, and I know of no place in the United States where as much health and pleasure can be had for the outlay as on the Halifax and Indian rivers, and the region of Lake Worth and Biscayne Bay, on the east coast of Florida, from October till May. But I have been told by people that I met in their own homes on Key Largo, that during the summer months mosquitoes sometimes covered the sides of their houses till the color of the boards was hidden by them, and they were forced to shut themselves in-doors to escape the mosquitoes at certain hours of the day; but there were sandflies and gnats, fleas and jiggers or redbugs so small that but few people can see them without the aid of a glass; the poison of their bites lasts for days. I would rather endure a thousand mosquitoes that I can shut out, than one of these redbugs, as they threw me into a fever. I have scars that I have carried for 20 years resulting from their bites, before I learned how to destroy them, which can be done by heating the flesh at an open fire, hot enough to kill them, which also cures the terrible itching and swelling caused by their poisonous bites.

I would not suffer these things anywhere, even if I could produce 1,000 fancy sections of honey to the colony; and I would be very glad if Mr. Poppleton, or any one else, will tell what we can learn nowhere else of the dark side—what the bee-keeper must meet that makes his life miserable in Cuba.

District of Columbia.

A Reply to a Criticism on the Golden Method of Producing Comb Honey.

BY J. S. HARTZELL.

In presenting to the readers of the American Bee Journal the product of my apiary, etc., for 1898, on page 657, I had thought I would not write anything more for publication before the close of the season of 1899, if spared, and then make up my account; but through the kindness of an esteemed friend and fellow bee-keeper I have been introduced to another "Doubting Thomas"—Mr. R. L. Taylor—who has appeared on the arena, presenting in the columns of the Bee-Keepers' Review his criticisms on my report and the Golden method of comb honey production.

Before replying to Mr. Taylor's criticisms, I wish to say I would esteem it but just and right that when any article is criticised, the criticism should appear in the same journal the first article had been publisht. Otherwise it would necessitate the taking of all journals pertaining to apiculture to keep informed in relation to the articles written, which would be a costly expedient; for had it not been for the friend spoken of, sending me the November issue of the Review, I would not have known of the critic's criticism.

Mr. Taylor appears very much surprised that the 40 colonies on the Golden plan yielded 46 13/20 sections per colony, while the 21 colonies run on the ordinary plan yielded only 23 2/7 sections per colony, of completed honey. *These, however, are facts.*

Mr. Taylor says: "Mr. Hartzell seems to be imprest with the idea that this *naked statement* should be sufficient to convince any one of the *great superiority* of the new plan, but I [Mr. Taylor] *doubt* if any one will be convinced."

Now, fellow bee-keepers, is that surprising? Doubting Thomas saw the Lord after his resurrection, but would not be convinced that it was He, until the Lord requested him to reach hither his finger and behold His pierced hands, and reach hither his hand and thrust it into His side, and be not faithless (doubting) but believing. After which, in astonishment, Thomas cried, "My Lord and my God!" Doubters! yes, bless you, plenty of them. The antediluvian world doubted the admonitions and preaching of Noah, and perisht after a lapse of 120 years, when the fullness of time had come; the Jews doubted the coming of *the* Christ, or Messiah, and are still in doubt. Three-fourths of the residents of the United States, and of the world, are doubters of Christianity, or, if not, would be identified with the Christian church. I will not, therefore, undertake to convert Mr. Taylor, for his doubting is so deeply implanted in him that I deem it would be a useless endeavor to try to get him to test the Golden plan.

The next quotation from Mr. Taylor's criticism reads thus: "In the first place, it is entirely too good to be true;" and follows by saying: "I am not questioning the truth of Mr. Hartzell's statement." This appears to me very strange logic—"too good to be true;" yet "not questioning the truth," etc. See how unjust Mr. Taylor is. It still remains, however, that "truth crusht to earth will rise again."

The statements made by me concerning the products of my apiary are true, and Mr. Taylor's references to exactness, scale tests, etc., are quibblings of his. I made no selections of colonies, and to fully satisfy myself I applied the Golden method promiscuously throughout my apiary. No feeding was done, no account taken of weight, or of young or old queens; the swarms on the Golden as well as on the ordinary plan were returned, and the entire apiary managed without increase.

Mr. Taylor, I presume, from his inquisitiveness, is in no sense competent to criticise the Golden method, else he would not make inquiries as to what was done with swarms from each class, weights of each brood-nest at the end of the season, etc. Bless you, Mr. Taylor, on the Golden plan we want all colonies to swarm, but the swarms are to be returned, and if you will turn to Mr. Golden's article publisht in the American Bee Journal of July 30, 1896, your eyes may behold the dawning of a new era in bee-keeping.

I tested six colonies on the Golden plan in 1897 (see my report on page 741 of that year). That experiment with the Golden plan satisfied me as to its worthiness, and the past season's experience doubly convinced me of the superiority of the Golden method over any other in vogue.

Has Mr. Taylor ever tested the Golden plan? If not, will he be manly enough to give it a fair trial in 1899? Or will he continue his criticisms without applying tests, and thus remain a *doubter?*

O, could we make those doubts remove—
Those gloomy doubts that rise.

Somerset Co., Pa.

Langstroth on the Honey-Bee, revised by The Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both together for only $2.00.

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BIOGRAPHICAL

MR. WUNG LUNG.

Mlister Leditor Melican Blee Jurnl :—Plaps I tlink you likee see my picture. Me velly fline man—that's what my flends say—slome say me dlude and slom say me lady's man, all same Mlister Lambler. I like tell you me no dlude and me no clare for ladies, except my wiffo. Me plain Wung Lung, one-time legetable man, now sugar-fly keeper and miner.

Lots Melican man get him plictlure in blee-papers. He awlso tell allee bout himself. I tlink I like do awlasame Melican man.

I blorn near Plekin, so you see me glood Chinaman—no Coolie blout me. I go school to Plofessor Al Jung Kook, who kleep academy near my father's lice flield. When sleventleen yers old me come Clalifornia, where my clousin come first, and like he make heep money washee and ironee. I tly wash-tlub little while and no likee him. I likee out-door belly muchee, so me go in plartnership with one Chinaman, and laise legetable in Alameda county. My plartner no good man; he too muchee cheatee me. I lose money.

Residence of Capt. Wung Lung, in California.

Next me lun lanch of glarden tluck myself. I send you plictlure of my old home sometime ago. At this place me first commence to keep sugar-fly. Me do belly well with legetable and sugar-fly. Make heep much money. Me get another plartner; this time he belly good man.

Pretty sloon, blime bly, me go China see my old home. War come on and me go fight Japanese man. Near Plort Arthur me get belly bad shottee and long time hap die. Me no die, just slame, but long time get well. My clusin, Li Hung Chang, make me Claptain for blavery shown on the field of battle. War all over me cum back to Melica. Now me got heep nice wiffo in San Flancisco.

Last April I lite Mlister McKinley and offer my slervices as officer or plivate in Melican larmy to go and flight Splanish man. I tell him that I much plefer to go to Manilla, as heap Chinaman there, and belly muchee chance for me to make money there when the war is over. I tell him, Mlister McKinley, that heep lich Nu York man go to Manilla so as to grab land and money down there soon as no more fightee Splanish man. Mlister McKinley no answer my letter; I guess he think me too honest. So I next lite to Mlister Jim Bludd—you know Mlister Jim Bludd—him Glovloner Clalifornia. Well, he tell me too many Melican man want to go to flight Splanish man, so he had to give them a chance first. When I flnd I could no more be solger, I go to the mines. I tell you blout mines next time. As I take up muchee you splace allredy, I won't tell blout my blees.

Slome one say, in one of the sugar-fly papers, that the only Chinaman in Melica that keeps sugar-fly is in Los Langles clounty; he make mistake, and if he had led the "Old Reliable" he would have sleen that I kept sugar-fly near Slan Flancisco four ylear ago.

Me could tell you belly muchee more blout myself, but you might tlink me legotistical.

Tell your leaders, Mlister Leditor, should you print my plicture, that I do not dress every day as I applear in the plotoglaph I send you. This is my best suit, and I wear it when I go to Slunday schlool, to a funeral, or to a wedding. I am slorry my queue is not shown at length; if you look close you will see that it is wound round the black of my head. You will note that it shows off my flace to great advlantage. Still, I should like to have had it exlibited across the front of my jacket, as it is a beautiful queue, and I take heep muchee plide in it. I may tell you more about this and blees the next tlime I lite you. Gud Bly. WUNG LUNG.

[It is with some degree of pride that we reproduce Captain Wung Lung's photo' in the "Old Reliable." While we recognized from the letters we received from him in the past, that he was quite an intelligent celestial, we did not know that he was such a distinguisht personage until we read the above modest, and, we feel sure, very incomplete autobiographical sketch. He shows commendable ambition—from a knight of the wash-board and flat-iron, he has become, we understand, a distinguisht apiarist, a brave soldier, and a gold-miner. We hope, later on, to give some racy letters from him about the mines and bees.—EDITOR]

Capt. Wung Lung.

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The McEvoy Foul Brood Treatment is given in Dr. Howard's pamphlet on "Foul Brood; Its Natural History and Rational Treatment." It is the latest publication on the subject, and should be in the hands of every bee-keeper. Price, 25 cents; or clubbed with the Bee Journal for one year—both for $1.10.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Keeping Bees Near a Railroad.

I have moved to this place, and I will bring here about 36 colonies of my bees. I have plenty of room to put them, altho the most out-of-the-way place would be right along a pale fence, and right back of this fence is a cut about 12 feet deep—a railroad where a heavy freight train is pusht through from six to eight times a day (except Sunday). Would there be any harm to the bees or railroad men? The back of the hives are toward the railroad. PENN.

ANSWER.—Reports from those who have had bees close to trains seem to agree that the bees are not hurt by them. No anxiety need be felt about the bees disturbing the railroad men, for the cut being 12 feet deep would make the bees fly over the trains, and the pale fence would practically make the cut as much deeper as the height of the fence. Of course, the bees could fly through between the pales, but you'll find they will not do so.

Mismated and Cross Bees.

I divided a colony of Italian bees, and the young queen they reared looks like her mother, but her bees are different altogether. They look browner, and the yellow stripes look whiter. What would you call them? They are good honey-gatherers, and like to rob whenever they get a chance. Would it be wise to breed from such stock? NEBR.

ANSWER.—The bees are hybrids. The queen has mismated, and the bees are a cross. It may do to breed from them, but you will probably do better to breed from the pure stock from which they came. That will secure you more of the same kind very likely. As you say, they are good workers, tho likely to be cross, and if you breed from them the next generation may not be so good.

Feed for Bees in Spring.

Would not any sugar, or syrup, that we know to be made from the pure juice of the cane, be good for feeding bees in the spring, for increase, whether it is granulated, clarified, or not? I can get some that granulated after being made into molasses, if it will do to feed. ALA.

ANSWER.—Yes, any molasses, sugar, or anything of the sort may be fed to the bees when they are flying daily, providing it be not stored for winter. In the fall it would not do.

Doolittle's Method of Queen-Rearing.

1. I do not fully understand the Doolittle method of rearing queens. Are the cells that contain the young larvæ to be cut down so as to more easily transfer to the artificial queen-cups? How is the stick or tool made to transfer with?

2. How is the nursery made, and how is it placed in the hive? How soon after the bees finish the cells should they be placed in the nursery? COLORADO.

ANSWERS.—1. Mr. Doolittle shaves down with a sharp knife the cells containing the larvæ to within ⅛-inch of the septum. The tool used for transferring the larva is "a goose-quill tooth-pick, having its point broad and curved."

2. In "Doolittle on Queen-Rearing" you will find on page 76 the following: "I make the queen-nursery as follows: Sixteen blocks are gotten out, 2⅝x2⅝x⅞ of an inch, which exactly fill one of my frames. A 1½-inch hole is bored in the center of each of these blocks, over which is tackt a piece of wire-cloth having 12 to 16 meshes to the inch, and being two inches square. Before tacking on the wire-cloth, I bore in the edge of the block, (which is designated for the top after the block is put in the frame) a ¾-inch hole, boring down to within ⅛ of an inch of the 1½-inch hole. I now finish boring the hole with a ½-inch bit. This hole is for the queen-cell to be placed in, and the reason for the two sizes of holes is to give a shoulder, so that the queen-cell can hang in the block, the same as it does on the comb, and still be in no danger of slipping through into the block. This hole is bored a little to one side of the center, so as to allow room for a ½-inch hole on the other side, which is to receive the candy; the latter hole is so bored that it comes out near one side of the 1½-inch hole, and when it is deep enough, so that a hole large enough for the queen to enter, is made, I stop boring, for a shoulder at the bottom is needed to keep the candy in place. Now fill the hole with candy, packing it in with a plunger made to fit the hole loosely, and tack on the wire-cloth. The blocks can be made so that a given number will fit any frame in use. I only give this description as the right size to use in the Gallup frame."

These blocks are put in a brood-frame and hung in the hive like any frame. The cells are put in the nursery when nearly ready to hatch.

Having answered these questions thus far directly from Mr. Doolittle's book, I confess to a very unsatisfied feeling, for there are so many more things that ought to be told to any one who thinks of rearing queens by Mr. Doolittle's method. But it will hardly do to go on and occupy page after page with quotations from the book, and I can hardly urge too strongly any one who thinks of rearing queens according to the teachings of the book to get the book for himself. I think I am about eight years older than Mr. Doolittle as a bee-keeper, and have had no little personal experience in rearing queens, but you couldn't get his book from me for a five-dollar bill if I couldn't get another one. When I got it I was so fascinated with it that I couldn't stop reading any more than the inveterate novel-reader. He has had an immense experience in queen-rearing, and has thrown his whole soul into it, and he has the rare knack of telling clearly and explicitly just what is desirable to be known, with many a little kink that others might not think of giving, but which are essential to complete success. If you have any idea of taking into your own hands any part of the rearing of queens, by all means get Doolittle's "Scientific Queen-Rearing." You'll like it, and you'll like the man that wrote it. [We mail the book, bound in cloth, for $1.00; or for $1.75 the Bee Journal one year and the book.—EDITOR.]

Bees Wintering in a Beer-Case.

Last May I captured a swarm of bees and put them into a beer-case, not having a hive handy. They began to gather honey, and so I was told not to change them until spring. I took a box four feet square, put a roof on it, covered the inside with building-paper, and the outside with felt tar-paper, then put a pipe in through the roof to the bottom of the box, and set the hive in the middle on a shelf. Then I put some straw between the hive and box, and covered the outside box with snow. Do you think they will live through the winter? I took no honey away, and I should judge the whole thing weighed 40 pounds or more. MINN.

ANSWER.—It isn't entirely clear from your description just what provision there is for the bees to get air and to fly out on warm days. If that part is all right, your bees ought to stand a fair chance to winter through. If that pipe through the roof down to the bottom is the only entrance to the hive it will hardly do. There ought to be provision made for entrance and exit at the regular place where the entrance was before they were packt, and it is better for the entrance to be such as to allow the bees to enter horizontally.

Removing Winter-Cases—Stimulative Feeding—Transferring, Etc.

I am wintering 66 colonies of bees—47 in dovetailed single-walled hives, with winter-cases, 13 in the old-fashioned 10-frame Root chaff hives, and one in a single-walled hive packt in straw in a dry-goods box. Now then:

1. When should I remove the winter-cases in the spring—about what time?

2. I desire to transfer the others into single-walled dovetailed hives; what time in the spring should it be done?

3. I desire to feed them in the spring to stimulate brood-rearing. Should this be done before transferring?

4. In this locality we have no Alsike clover, and but very little basswood. Ten miles from here there are hundreds of acres of Alsike, and 1200 or 1500 basswood trees within a range of a mile. I desire to remove about 25 of my colonies there in the spring, the ground costing me little or nothing.

a, Will it pay? b, If so, should it be done before or after feeding? c, Will it be necessary to move winter-cases and all?

5. How can I use a Boardman feeder while the bees are still packt in chaff?

6. Would you advise starving bees upon warm days to give them a flight? MICHIGAN.

ANSWERS.—1. Unless there is danger of starvation, it is not necessary to remove them till weather has fairly warmed up and bees are at work on fruit-bloom, if indeed there is need of it before time for putting on supers.

2. The favorite time is during fruit-bloom.

3. Try not more than two or three before fruit-bloom, some of them in the gap between fruit-bloom and clover, and leave the rest without feeding. If you hurt instead of help those fed before fruit-bloom, it won't matter much, because the number is small. By feeding part and leaving part without feeding after fruit-bloom, you will be able to judge somewhat whether it is wise for you to practice stimulative feeding in the future. For it is well to remember that it is not agreed that stimulative feeding is a universally good thing.

4. a, It seems that it ought to pay big. b, Just in time to catch the first clover. c, No.

5. Probably you can't very conveniently.

6. Some pooh-pooh the idea, but on a day when other colonies were having a good flight, if I saw one not flying, I'd kick it.

Distance Bees kept from a Street--Queenless Colonies.

1. Is there any law in the city of Chicago, as to how far an apiary has to be located from a highway or street, whether it must be fenced in, etc.?

2. At what time in the spring do queens commence to lay, if the colony be in good condition?

3. What will be the result of a colony that loses its queen during the winter months?

4. What is to be done with such a queenless colony in spring? ILLINOIS.

ANSWERS.—1. I don't know, but I doubt there being any specific law on the subject. Any Chicago lawyer can tell you, or you can find out for sure if you put your bees where they will sting passers-by. Your wise course is to take it for granted that the law does not allow you to endanger your neighbors, for if you do you will probably find there is law enough against you. This is one of the cases in which it pays well to keep on the safe side. A little injudiciousness on the part of one bee-keeper may make it warm for every bee-keeper in the whole city.

2. Wintered out-doors, you may find eggs in February. If all goes well in a cellar, the queen is not likely to lay till the bees are brought out.

3. Death.

4. Unite with a weak colony that has a queen, or distribute among several colonies that need help. Of course, you can give it brood from another colony and let it rear another queen, and that's almost certainly the thing you'll insist on doing if you haven't had much experience, but after a little experience you'll find it doesn't pay.

Building Combs in Wired Frames.

Will bees hived or transferred on empty frames, pierced and wired horizontally, with inch starters, draw out their combs around the wires the same as if they had full sheets? MICHIGAN.

ANSWER.—Not always, and probably not often. They will build down the combs just as they would if no wires were there, and wherever the wire happens to come it will be built into the comb. One would be likely to think that if the wires are stretcht true in the center of the frame, and the hive is perfectly level from side to side, the comb being built down perpendicularly will have its septum correspond exactly with the wires. So it would if the combs were built entirely straight from one end to the other. But bees, when left to themselves, have a trick of building their combs corrugated or waving, which would allow the horizontal wires to correspond with the septum only a small part of the way.

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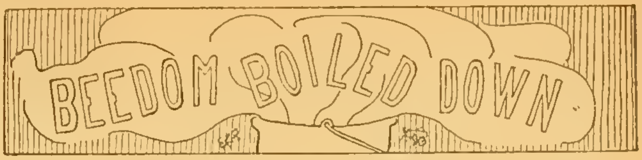

Making Bees Immune to Foul Brood.—In the British Bee Journal J. H. S. suggests that altho it is highly optimistic and theoretical, yet considering the Pasteur treatment for hydrophobia and the antitoxin treatment for diphtheria, it is not impossible that bees might be made immune to foul brood by an artificially-produced foul-brood anti-toxin. He thinks the treatment would resolve itself into the rendering of the queen of each hive immune, a certain part of this immunity would be transmitted to her stock, drones included, and after some generations a race of immune bees might grow up.

Comb Honey, in the opinion of the editor of the Canadian Bee Journal, requires so much extra work in preparation, in looking after bees run for that kind of honey, and costs so much for sections, foundation and cases, that it raises the question whether it does not pay better to produce extracted honey. The skill, and the time required to apply the skill in producing comb honey for market, excludes, in his opinion, beginners and those devoting a large part of their time to other business. That last statement is a partial answer to the first. The limited field gives a better chance for remuneration to those who are in the field.

An Incomplete Experiment is what the Bee-Keepers' Review Critic calls the one given on page 657 of the American Bee Journal by Mr. Hartzell, in which the Golden method beat the common two to one. He thinks it is too good to be true, and before making any conclusion, all the conditions and all the results should be given with all the exactness that the closest scrutiny with the aid of scales can give. Mr. Taylor says:

"There are too many high claims made for new discoveries, which after a little time are given up as valueless, to warrant one in accepting with confidence any new plan whose results are proclaimed only in general and indefinite terms, unless there are inherent reasons to indubitably recommend it."

Boiling Fermenting Honey in Vacuo.—Mr. Hooker's experience in treating fermenting honey when in America, is given thus in British Bee Journal:

"He bought at a store a small quantity of honey; it was very thin, and had just commenced to ferment. His son, a chemist, employed in one of the sugar-refineries, proposed to thicken it without spoiling the aroma by boiling the honey *in vacuo*. A vacuum was accordingly created, and as soon as perfect a gas-stove was put underneath and the honey boiled. There was a certain amount of 'distil' as pure as water from it, while the honey became thicker and had remained thick ever since. The ferment was got rid of without damaging the aroma, and the honey was of a beautiful quality. The boiling was, of course, at a much lower temperature *in vacuo* than in atmospheric air."

Shall Bee-Keepers Make Their Own Hives and Fixtures?—Editor Hutchinson says he has made all his hives and fixtures, including sections when they were $8.00 a thousand. At present prices he can't afford to make sections. For the past two years he could buy shipping-cases more cheaply than he could make them. He still makes his hives, as he lives where lumber is cheap, and near planing-mills with good machinery and competent workmen, so he can get the material cut out and delivered at his door for much less than he can buy it at a factory. His frames he buys away from home, because the bee-hive factories cut them more cheaply than he can get them cut at home. He concludes by saying:

"This is one of those questions that each man must solve for himself. He alone knows all of the circumstances. Let him figure it all out carefully, taking into consideration all of the points that will have a bearing on the subject, and then do what seems best."—Bee-Keepers' Review.

MR. S. H. STEPHENS, JR., of Ellis Co., Tex., reports that from three of his colonies he took 570 pounds of nice honey the past season. Whether comb or extracted, that surely was a good yield.

AMERICAN
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA
BEE JOURNAL
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

GEORGE W. YORK, EDITOR.

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EDITORIAL COMMENTS

NOTE.—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

A Very Happy New Year we wish all our readers. We greatly desire that 1899 shall be the banner year for the old American Bee Journal—in the number of its regular subscribers, and in its general reading-matter. We have faith that it will be. This year we believe was the very best this journal every experienced—in the two lines referred to. But next year—the new year of 1899—ought to be still better. Why not? We hope to be able to do *our* part. Will *you*, esteemed subscriber, do *yours?* Let us join hands for 1899, and pull together.

◆

The Last Number of the Year, we sometimes think, should contain only the index to the preceding 51 numbers. We believe our readers would be entirely satisfied if such were the case, for during the Holidays most people are too busy to think—that is, to think of anything but Christmas gifts and good wishes for their friends.

Doubtless something else besides a long, dry index will be appreciated, and so one-half of this number is devoted to reading-matter, as has been our custom for years and years.

◆

Winter Time for Reading.—The longest evenings of the whole year are upon us. What a splendid time to "read up" on bees! Some bee-keepers think it useless to take a bee-paper during the winter, when the bees are resting; and there is where they make a very large mistake. They miss perhaps the very things that might help them most in handling their bees the next season.

Some of our readers will receive this number of the Bee Journal as their final one. At least they have written us to discontinue it after this week, and we always obey such orders, tho we often feel that such bee-keepers are making an error, unless it be those who have stopt keeping bees. But we have a very few readers who take the Bee Journal just because they like to read it, having no bees. Of course such are exceedingly rare.

Let us urge you, in this last number for 1898, to spend the winter evenings in reading bee-literature. If you have no standard book on bee-keeping, get one at once, and read it in connection with the American Bee Journal. By so doing you will find that by another bee-season you will be ever so much better equipt for your work. Try it, and see for yourself.

◆

Journalistic Courtesy, as applied to bee-journalism, is a subject wisely toucht on by Prof. Cook in his article on page 819. We think all the apiarian editors, not excepting ourseles, need to devote a little more thought to this matter than apparently has been given to it the past few months. We have been pretty severe several times the past year on some apiarian writers when doubtless milder words would have served our purpose as well, sounded better, and accomplisht more.

While the bee-literature of recent years has improved greatly along the lines indicated by Prof. Cook, there is still room for more of the same kind of reform in every apiarian periodical now before the American people.

It will be *our* endeavor, hereafter, to avoid the discourtesies referred to, at least so far as this journal is concerned, and also try to refrain from noticing in our columns those found in the other bee-papers. We are quite willing that our competitors shall have a monopoly in that line if they desire it.

◆

The Annual Index will be seen on the opposite page. We trust it may be found useful by all. It certainly will be invaluable to every one who has preserved the complete volume of the Bee Journal for this year.

◆

Bees and Horticulture.—The value of the honey-bee to the horticulturist, says Green's Fruit Grower, is hardly realized by many who are engaged in fruit-growing. The setting of fruit that will stay on the tree depends chiefly upon proper pollination, and in this work the bee is largely instrumental. There are, of course, other instrumentalities, but perhaps none so effective.

Experiments at the Oregon station with the peach throw a good deal of light on this subject. A number of peach-trees were forced into bloom under glass in November, and a colony of bees was placed in the house with the trees as soon as the bloom began. For several days a heavy fog prevented the bees from working, but on the first bright day that came, the bees went to work and continued at it as long as there was anything on the trees to work on. The result was that at the stoning season, the time when unfertilized fruit drops, not a peach fell from the trees, and the crop was so heavy that it had to be severely thinned.

As a check test, one tree was so protected that the bees could not get at it, and from this tree all the fruit dropt at the stoning period. Insects, and especially bees, which have the nectar-secreting instinct as a motive for labor on bloom, are an aid to pollination, for which Nature seems to have provided no adequate substitute. Their office is to distribute pollen from flower to flower, and from tree to tree.

Much of the complaint about fruit falling would cease if horticulturists kept bees in the orchard. For the protection of bees the horticulturist should never spray while the trees are in bloom. He owes that much to these valuable assistants in his work.

◆

☞ See Bee-Keeper's Guide" offer on page 814

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Convention Notices.

California.—The California State Bee-Keepers' Association will hold its annual convention at the Chamber of Commerce, in Los Angeles, Jan. 11 and 12, 1898.
Sespe, Calif. J. F. McIntyre, Sec.

New York.—The New York State Association of Bee-Keepers' Societies will hold their annual meeting at the Kirkwood Hotel, Geneva, N. Y., Jan. 11, 1899. All interested are invited. Bee-keepers' societies are especially invited to send delegates. There will be an exhibit of microscopic preparations of foul brood (Bacillus alvei), and discussions relating to foul brood legislation. Harry S. Howe, Sec.
Ithaca, N. Y.

Colorado.—A committee chosen by a special meeting of bee-keepers, hereby, in accordance with its instructions, calls a second meeting of Colorado bee-keepers interested in orgaized marketing, on Tuesday, Jan. 3, 1899, at 10 a. m., at the Western hotel, corner 12th and Larimer Streets, Denver, Colo., at which meeting it will present for discussion a Constitution and By-Laws for a marketing organization.
W. L. Porter, Chairman of Committee.
F. L. Thompson, Sec. of Committee.

N. E. Ohio, W. N. Y., N. W. Pa.—The 18th annual convention of the N. E. Ohio, Western New York, and N. W. Pennsylvania Bee-Keepers' Association will be held in the City Hall, Cor. 13th and Buffalo Sts., Franklin, Pa., Jan. 11 and 12, 1899. The following is the larger part of the program:

President's Annual Address—Geo. Spitler, of Pennsylvania.

"Spring Management of Bees"—L. K. Edgett, of Pennsylvania.

"Summer Management of Bees"—R. D. Reynolds, of Pennsylvania.

"How can the Conditions of the Local Market be Improved?"—B. W. Peck, of Ohio.

"The best means of Increasing the Local Honey-Resources"—H. S. Sutton, of Pennsylvania.

"Profitable Use of Comb Foundation"—J. T. Nichols, of Pennsylvania.

"Making our Association More Useful"—Geo. Spitler, of Pennsylvania.

"Preparing Bees for Winter"—N. T. Phelps, of Ohio.

"Experiences of the Past"—D. A. Dewey, of Pennsylvania.

Notice—It is hoped that all will make an effort to be at this convention, and take an active part in the discussions. Special rates of $1.00 per day for those attending the convention have been secured at the United States Hotel, on Liberty Street.
Geo. Spitler, Pres., Mosiertown, Pa.
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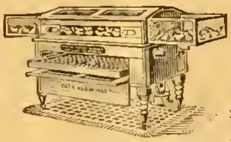

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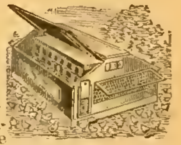

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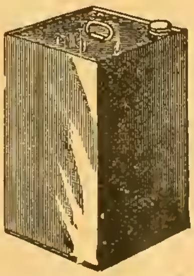

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Best Basswood Honey in Barrels.

We have a quantity of finest basswood honey in barrels, weighing 625 pounds net, which we are ready to ship f. o. b. Chicago, at 7½ cents a pound. Sample mailed for 8 cents. If desiring to purchase, let us know, and we will write you the exact number of pounds in the barrel or barrels, and hold same till you can send the cash for it by return mail.

Our honey is **ABSOLUTELY PURE BEES' HONEY**, the finest of the kinds produced in this country.

☞ We would suggest that those bee-keepers who did not produce any honey for their home demand the past season, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. Address,

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

Sweet Clover

And Several Other Clover Seeds.

We have made arrangements so that we can furnish seed of several of the Clovers by freight or express, at the following prices, cash with order:

	5lb	10lb	25lb	50lb
Sweet Clover	.60	$1.00	$2.25	$4.00
Alsike Clover........	.70	1.25	3.00	5.75
White Clover.........	.80	1.40	3.00	5.00
Alfalfa Clover.......	.60	1.00	2.25	4.00
Crimson Clover.......	.55	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage. wanted by freight.

Your orders are solicited.

GEO. W. YORK & CO., 118 Mich. St., Chicago.

ANYONE INTERESTED

in Agricultural Pursuits can't afford to be without the

AGRICULTURAL EPITOMIST.

Sample copy Free to any address upon receipt of name and address plainly written on postal card naming paper in which you saw this ad.

Address AGRICULTURAL EPITOMIST. Indianapolis, Ind.

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Comb Foundation

Wholesale and Retail.

Working Wax

INTO FOUNDATION FOR CASH A SPECIALTY.

Hives, Sections,

and a full line of SUPPLIES.

The best of everything. Write for Catalog, with prices, and samples of Foundation and Sections.

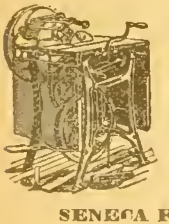
Beeswax Always Wanted

for Cash or Trade at highest price. Catalog for 1899 will be ready in January.

Send me your name, whether you are a small or large consumer or dealer.

GUS DITTMER, Augusta, Wis.

Please mention Bee Journal when writing.



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Can do the work of four men using hand tools, in Ripping, Cutting-off, Mitring, Rabbeting, Grooving, Gaining, Dadoing, Edging-up, Jointing Stuff, etc. Full Line of Foot and Hand Power Machinery Sold on Trial. Catalogue Free.

SENECA FALLS MFG. CO.,
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HATCH CHICKENS

BY STEAM—with the simple, perfect, self-regulating

EXCELSIOR INCUBATOR

Thousands in successful operation. Lowest priced 1st-class hatcher made.

GEO. H. STAHL,
114 to 122 S. 6th St., Quincy, Ill.

Circulars free. Send 6c. for Illus. Catalog.

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BEES, HONEY, MONEY

Queens for Business.

Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

J. P. H. BROWN, Augusta, Ga.

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26c Cash Paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **26 cents a pound — CASH** — upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

We want

EVERY BEE-KEEPER

......To have a copy of......

Our 1898 Catalog

☞ Send us your name and address and we will take pleasure in mailing you a copy.

G. B. LEWIS CO., WATERTOWN, WIS.

Special Agent for the Southwest—

E. T. ABBOTT, St. Joseph, Mo.

Mr. Abbott sells our Hives and Sections at factory prices.

Buy Your Sections Now

while we offer them at a **LARGE DISCOUNT,** having added to our plant one of the most complete one-piece section machines, enabling us to turn out the most beautiful sections on the market. By sending us a list of Supplies wanted we can save you $ $ $. **R. H. SCHMIDT & CO.,** Box 187, SHEBOYGAN, WIS.

TO SELL OR LEASE FOR CASH.

An up-to-date Apiary consisting of 200 good colonies or over, with Fixtures complete. Privilege to remove to some other location if desired. Correspondence solicited. Address,

THE GILA FARM CO.
51A6t *Cliff, Grant Co., N. M.*

The Bee-Keeper's Guide

This 15th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to give away to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published today. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without "THE BEE-KEEPER'S GUIDE."

Given For 2 New Subscribers.

The following offer is made to PRESENT subscribers only, and no premium is also given to the two new subscribers—simply the Bee Journal for one year:

Send us Two New Subscribers to the Bee Journal (with $2.00), and we will mail YOU a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both together for only $1.75. But surely anybody can get only 2 new subscribers to the Bee Journal for a year, and thus get the book as a premium. Let everybody try for it! Will you have one?

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

Page & Lyon Mfg. Co. New London, Wisconsin,

Operates two sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of

Bee-Keepers' Supplies.

They have also one **One of the Largest Factories** and the latest and most-improved machinery for the manufacture of

Bee-Hives, Sections, Etc.,

that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the

Best Goods at the Lowest Prices.

Send for Circular and see the Prices on a Full Line of Supplies.

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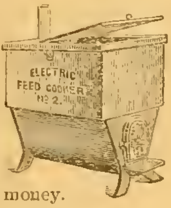

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COOKERS

cook all kinds of feed for live stock, whole or after being ground. They are made of the best cast gray iron and lined with plates of steel. This prevents any burning or warping.

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than any cooker made. The boiler is made of best galvanized steel of the proper weight for the purpose. Made in three styles and five sizes, to hold 25 to 100 gals.

They Save Feed

and produce better results from less than half the grain. Don't go into the winter's feeding without one. Send for our free book on "Feed Cooking." It will save you money.

ELECTRIC WHEEL CO., Box 16 Quincy, Ill.

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"WATCH POUDER'S AD"

SEE THAT WINK!

Bee-Supplies! ROOT'S GOODS at Root's Prices.

Pouder's Honey-Jars, and every thing used by bee-keepers. Prompt service, low freight rate. Cat- free. Walter S. Pouder,
512 Mass. Ave.,
INDIANAPOLIS, INDIANA.

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A VALUABLE BOOK
ON POULTRY FOR 1899 FREE.

Something entirely new: the largest out; worth $25. to anyone. Tells all you may want to know about poultry. How to build poultry houses and MAKE BIG MONEY with poultry. Send 15c. for postage and mailing.

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Box 94 Freeport, Ill.

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FREIGHT PAID
to any address. That's the way we send out our
CYPHERS INCUBATOR.

It combines the good qualities of all machines and has the faults of none. Our Catalogue and Guide to Poultry Culture tells all about the laws of incubation, and how to raise, feed and market poultry—all about the money end of the business. Contains plans for construction and cost of modern poultry houses and many other things worth knowing. Sent for 10 cts.

THE CYPHERS INCUBATOR CO. Box 50, Wayland, N. Y.

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PATENT WIRED COMB FOUNDATION

Has No Sag in Brood-Frames

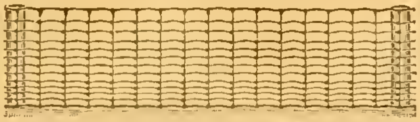
Thin Flat-Bottom Foundation

Has No Fishbone in the Surplus Honey.

Being the cleanest is usually worked the quickest of any Foundation made

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook Montgomery Co., N. Y.

BEE-KEEPERS! Let me send you my 64-page Catalog for 1898
J. M. Jenkins, Wetumpka, Ala.



"TEDDY" ROOSEVELT SAYS:

"Didn't expect anything. I went to take things as they came." Just like **Page Fence,** takes everything—except defeat, and is always ready.

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

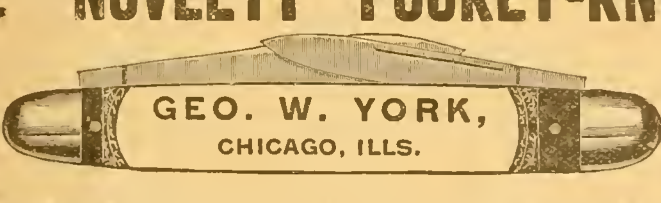
FREE FOR A MONTH.

If you are interested in sheep in any way you cannot afford to be without the best and only weekly sheep paper published in the United States.

WOOL MARKETS AND SHEEP ❧ ❧ ❧

has a hobby which is the sheep breeder and his industry, first foremost and all the time Are you interested? Write to-day

Wool Markets & Sheep, - - Chicago



THE "NOVELTY" POCKET-KNIFE!

Your Name on the Knife.—When ordering, be sure to say just what Name and Address you wish put on the Knife.

The NOVELTY KNIFE is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed an AMERICAN BEE JOURNAL reminder, and on the other side, name and residence of the Subscriber.

The material entering into this celebrated knife is of the very best quality; the blades are handforged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring steel, and the finish of handle as described above. It will last a lifetime, with proper usage.

Why purchase the Novelty Knife? In case a good knife is lost, the chances are, the owner will never recover it; but if the Novelty is lost, having name and address of owner the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelties, your pocket KNIFE will serve as as an identifier; and in case of death, your relatives will at once be apprised of the accident.

How appropriate this knife is for a Christmas, New Year or birthday present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, a lady to a gentleman, or vice versa, a son to a mother, a husband to a wife, a brother to a sister or a gentleman to a lady—the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid, for $1. , or give it as a Premium to the one sending us **three new Subscribers** to the BEE JOURNAL (with $3.00), and we will also send to each new name a copy of the Premium Edition of the book "Bees and Honey." We club the Novelty Knife with the BEE JOURNAL for one year, both for $1.90.

Any Name and Address Put on the Knife. GEORGE W. YORK & CO.,
CHICAGO, ILLS.

☞ See Honey Offer on page 829.

HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Dec. 19.—Market is about as last quoted. Best white comb brings 13c, with off grades of white at 11@12c; amber, 9@10c. Some lots have come on the market and are being offered at prices that would be reduced if buyers could be found. Extracted steady at 6@7c for white and 5@6c for amber. Beeswax, 27c. R. A. BURNETT & CO.

Detroit, Dec. 8.—No change in supply of honey as to quality, but prices are somewhat lower than last quotations, viz.: Fancy white, 13c; No. 1, 12@12½c; fancy dark and amber 9@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

Columbus, O., Dec. 15.—Honey arriving freely. There is quite an accumulation, and concessions in prices are necessary to move stock. Following prices are nominal: Fancy white, 12½c; No. 1, 11½c; No. 2, 10c; amber, 9c; dark, 8c.
COLUMBUS COM. AND STORAGE CO.

St. Louis, Sept. 9.—Fancy white comb, 12 to 12½c.; A No. 1 white, 10 to 11c; No. 1 white, 9 to 10c.; dark and partially-filled from 5 to 8c. as to quality. Extracted in cases, No. 1 white, 6 to 6½c; No. 2, 5½c; amber, 5c; in barrels, No. 1 white, 5½c; amber, 4½ to 5c; dark, 4 to 4½c. Choice Beeswax, prime, 24c; choice, 24½c. At present there is a good demand for honey. WESTCOTT COM. CO.

Kansas City, Sept. 9.—Fancy white comb, 12@13c; No. 1, 11@12c; amber, 10@11c. Extracted, white, 5½@6c; amber, 5@5½c; dark, 4½@5c. Beeswax, 22@25c.
The receipts of comb honey are larger.
C. C. CLEMONS & CO.

Milwaukee, Oct. 18.—Fancy 1 pounds, 12½ to 13c; A No. 1, 12 to 12½c; No. 1, 11 to 12c; No. 2, 10 to 10½; mixt, amber and dark, 8 to 9c. Extracted, white, in barrels, kegs and pails, 6½ to 7c; dark, 5 to 5½c. Beeswax, 26 to 27c.
This market is in good condition for the best grades of honey, either comb or extracted. The receipts of the new crop are very fair, and some of very nice quality. The demand has been and continues to be very good, and values are firm on fancy grades and straight, uniform packing. A. V. BISHOP & CO.

New York, Dec. 20.—The market is well supplied, especially with dark. Demand is but fair for white and dark and off grades are being neglected. We quote:
Fancy white, 12 to 13c; No. 1 white, 10 to 11c; amber, 9 to 10c; dark, 7 to 8c. Stocks of extracted of all kinds are light. White, 6½ to 7c; amber, 6c; dark, 5¾ to 6c; Southern, in barrels, 60 to 65c a gallon. Beeswax dull at 26 to 27c. HILDRETH BROS. & SEGELKEN.

Buffalo, Dec. 16.—Our market has become somewhat quiet since the holiday trade set in, and we consider 12 and 13c an extreme quotation for best one-pound combs now: with other grades ranging from 7 to 10 cents, according to inspection. Very little demand for extracted at from 4 to 6c. We advise the marketing of honey as readily as it can be judiciously sold. BATTERSON & CO.

San Francisco, Nov. 22.—White comb, 9½ to 10½c; amber, 7½ to 9c. Extracted, white, 7 to 7¼c.; light amber, 6¼ to 6½c. Beeswax, 24@27c
Stocks in this center are light and must so continue through the balance of the season. Choice extracted is especially in limited supply and is being held at comparatively fancy figures. Comb is meeting with very fair trade, considering that it has to depend mainly on local custom for an outlet Values for all descriptions tend in favor of selling interest.

Boston, Nov. 28.—Liberal receipts with but a light demand during the holidays. As a result stocks have accumulated somewhat, and prices show a lowering tendency, still we hope for a better demand with prices at present as follows:
Fancy white, 14c; A No.1 white, 12½ to 13c; No. 1, 11 to 12c; light amber, 10c, with no call for dark. Extracted, fair demand, light supply: White, 7 to 7½c; light amber, 6½ to 7c; Southern, 5 to 6c. BLAKE, SCOTT & LEE.

Cleveland, Nov. 29.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.
A. B. WILLIAMS & CO.

Indianapolis, Oct. 3.—Fancy white comb honey, 12 to 12½c; No 1, 10 to 11c. Demand fairly good. Tar-colored comb honey, 8 to 9c, with almost no demand. Clover and basswood extracted honey, 6½to7c Beeswax, 25 to 27c.
WALTER S. POUDER.

The Usual Fall Discount ✻✻✻✻✻

Is Now Allowed on Orders.
If you want.....

Shipping Cases, Crates, Extractors,

Or anything else, write to us. Catalog Free. Sample Copy

American Bee-Keeper,

(Monthly, 50c a year) FREE. Address,

THE W. T. FALCONER MFG. COMPANY
JAMESTOWN, N. Y.

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CARLOADS—

Of Bee-Hives, Sections, Shipping-Cases, Comb Foundation, and **Everything** used in the Bee-Industry.

We want the name and address of every Bee-Keeper in **America**. We supply Dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment.

Write for Catalogs, Quotations, etc.

Inter-State Manufacturing Co.,
HUDSON, St. Croix Co., Wis.

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If you care to know of its Fruits, Flowers Climate or Resources, send for a Sample Copy of California's Favorite Paper—

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The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated $2.00 per annum. Sample Copy Free.

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That covers the whole Apicultural Field more completely than any other published, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keeper's Guide.

Liberal Discounts to the Trade.

The A. I. Root Co.'s Goods Wholesale. Retail.

Including their discounts for Goods wanted for use another season. It will pay you to send me list of Goods wanted. **M. H. HUNT**
Cash for Beeswax. BELL BRANCH, MICH.

IT WILL PAY YOU
TO ATTEND THE

Eclectic Shorthand
✻✻✻ **College** ✻✻✻

Headquarters of the Cross Eclectic System. Lessons by Mail a specialty. Send stamp for alphabet,

94 Dearborn Street, CHICAGO.

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21st Year **Dadant's Foundation.** 21st Year

Why does it sell so Well?

Because it has always given better satisfaction than any other.
Because **IN 21 YEARS** there have not been any complaints, but thousands of compliments.

We Guarantee Satisfaction.

What more can anybody do? **Beauty, Purity, Firmness, No Sagging, No Loss. PATENT WEED PROCESS SHEETING.**

Send Name for our Catalog, Samples of Foundation and Veil Material. We sell the best VEILS, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

LANGSTROTH ON THE HONEY-BEE, Revised.
The Classic in Bee-Culture—Price, $1.25, by mail.

BEESWAX WANTED
AT ALL TIMES.

CHAS. DADANT & SON,
Please mention the Am. Bee Journal. **HAMILTON, Hancock Co., ILL.**

OUR MOTTO—"Well Manufactured Stock! Quick Shipments!"

SECTIONS, SHIPPING-CASES,
—AND—
BEE-KEEPERS' SUPPLIES.

We make a specialty of making the very best Sections on the market. The **BASSWOOD** in this part of Wisconsin is acknowledged by all to be the best for making **the One-Piece Honey-Sections**—selected, young, and thrifty timber is used.

☞ Write for Illustrated Catalog and Price-List FREE.

MARSHFIELD MFG. CO., Marshfield, Wis.

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Gleanings in Bee-Culture,
American Agriculturist (weekly),
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ALL ONE YEAR ONLY $1.00.

By special arrangement with the publishers, we are enabled to offer the American Agriculturist in combination with Gleanings at the unparalleled low rate of $1.00 for both papers one year including the Farmers' Almanac. The American Agriculturist is published in three editions: The New England Homestead, the American Agriculturist, and the Orange Judd Farmer. Each contains matter relating to its own locality, as well as the latest and most accurate market reports for the country in general. It has departments relating to all branches of farming, articles written by the most practical and successful farmers, supplemented with illustrations by able artists. Short stories, fashions, fancy work, cooking, young folks' page, etc., combine to make a magazine of as much value as most of the special family papers.

A sample copy will be mailed FREE by addressing American Agriculturist, New York, N. Y.

Taken separately these two papers and Almanac cost $2.50, consequently every subscriber under this offer will get **$2.50 in value for $1.00.**

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